

Technical Paper No. 423

The Harvest and Use of Wild Resources in Sitka, Alaska, 2013

by

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and

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March 2017

Alaska Department of Fish and Game

Division of Subsistence



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Weights and measures (metric)		General		Mathematics, statistics	
centimeter	cm	Alaska Administrative Code	AAC	<i>all standard mathematical signs, symbols and abbreviations</i>	
deciliter	dL	all commonly-accepted abbreviations	e.g.,	alternate hypothesis	H _A
gram	g		Mr., Mrs.,	base of natural logarithm	e
hectare	ha		AM, PM, etc.	catch per unit effort	CPUE
kilogram	kg	all commonly-accepted professional titles	e.g., Dr., Ph.D.,	coefficient of variation	CV
kilometer	km		R.N., etc.	common test statistics (F, t, χ^2 , etc.)	
liter	L	at	@	confidence interval	CI
meter	m	compass directions:		correlation coefficient (multiple)	R
milliliter	mL	east	E	correlation coefficient (simple)	r
millimeter	mm	north	N	covariance	cov
		south	S	degree (angular)	°
		west	W	degrees of freedom	df
		copyright	©	expected value	E
		corporate suffixes:		greater than	>
		Company	Co.	greater than or equal to	≥
		Corporation	Corp.	harvest per unit effort	HPUE
		Incorporated	Inc.	less than	<
		Limited	Ltd.	less than or equal to	≤
		District of Columbia	D.C.	logarithm (natural)	ln
		et alii (and others)	et al.	logarithm (base 10)	log
		et cetera (and so forth)	etc.	logarithm (specify base)	log ₂ , etc.
		exempli gratia (for example)	e.g.	minute (angular)	'
		Federal Information Code	FIC	not significant	NS
		id est (that is)	i.e.	null hypothesis	H ₀
		latitude or longitude	lat. or long.	percent	%
		monetary symbols (U.S.)	\$, ¢	probability	P
		months (tables and figures) first three letters (Jan.,...,Dec)		probability of a type I error (rejection of the null hypothesis when true)	α
		registered trademark	®	probability of a type II error (acceptance of the null hypothesis when false)	β
		trademark	™	second (angular)	"
		United States (adjective)	U.S.	standard deviation	SD
		United States of America (noun)	USA	standard error	SE
		U.S.C.	United States Code	variance:	
		U.S. state	two-letter abbreviations (e.g., AK, WA)	population	Var
				sample	var
Weights and measures (English)		Measures (fisheries)			
cubic feet per second	ft ³ /s	fork length	FL		
foot	ft	mid-eye-to-fork	MEF		
gallon	gal	mid-eye-to-tail-fork	METF		
inch	in	standard length	SL		
mile	mi	total length	TL		
nautical mile	nmi				
ounce	oz				
pound	lb				
quart	qt				
yard	yd				
Time and temperature					
day	d				
degrees Celsius	°C				
degrees Fahrenheit	°F				
degrees kelvin	K				
hour	h				
minute	min				
second	s				
Physics and chemistry					
<i>all atomic symbols</i>					
alternating current	AC				
ampere	A				
calorie	cal				
direct current	DC				
hertz	Hz				
horsepower	hp				
hydrogen ion activity (negative log of)	pH				
parts per million	ppm				
parts per thousand	ppt, ‰				
volts	V				
watts	W				

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2013**

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ABSTRACT

This report provides updated information about the harvests and uses of fish, wildlife, and wild plant resources by the community of Sitka. During February and March 2014, eligible households in Sitka answered questions about their harvest and use of fish, wildlife, and wild plants in 2013. Through these household surveys, researchers: 1) estimated annual harvests and uses of wild fish, wildlife, and wild plant resources in a 12-month study period by residents of the study community; 2) mapped areas used for hunting, fishing, and gathering; 3) collected demographic and income information; and 4) evaluated trends in wild resource harvests.

During the 2013 study year, most Sitka households used and harvested wild resources both for nutrition and to support their way of life. Sitka residents used a large variety of resources, harvested throughout much of Baranof Island, including salmon and other fish, marine invertebrates, large land mammals, marine mammals, and wild plants and berries, as well small land mammals, migratory waterfowl, and upland game birds. The total estimated harvest of wild foods for Sitka in 2013 was 1,377,571 usable pounds (175 lb per capita), slightly less than the previous harvest estimate but likely not a significant difference. Results indicate that the use, harvest, and sharing of wild resources remain important to the community.

Funding for the study was provided through the Alaska State Legislature as one component of an overall index community program, the purpose of which is to develop and implement a program to monitor subsistence harvests of fish and wildlife in all areas of the state through a system of index communities. The project was conducted collaboratively by research staff of the Division of Subsistence, Alaska Department of Fish and Game, and the Sitka Tribe of Alaska.

Key words: subsistence hunting, subsistence fishing, wild resources, Sitka

1. INTRODUCTION

This report provides updated information about the harvests of fish, wildlife, and wild plant resources by the community of Sitka (population 7,873). Sitka is located on Baranof Island in Southeast Alaska (Figure 1-1). This report details the results of a household survey administered between February and April 2014 for the 2013 study year. Over 90% of households in Sitka harvested and used wild resources in 2013. The highest harvested resource category by Sitka households was nonsalmon fish (which includes Pacific halibut), followed by salmon and large land mammals. The resource categories with the smallest harvests were small land mammals and birds and eggs. Sitka households rely on a diverse collection of wild resources, including all species of salmon, many types of nonsalmon fish (e.g., Pacific halibut, Pacific herring eggs, trout), land mammals such as deer, moose, and mountain goats, small land mammals, marine mammals, birds (waterfowl and upland game birds), marine invertebrates (e.g., crabs, clams, cockles, shrimp), and vegetation (a variety of berries, greens, seaweed, and firewood). Table 1-1 presents a list, including the Linnaean taxonomic names, of resources used by Sitka households in 2013.

Harvest information was collected by staff of the Alaska Department of Fish and Game (ADF&G) Division of Subsistence. The Division of Subsistence scientifically quantifies harvests of wild resources by Alaska residents to assist the Alaska Board of Fisheries and the Board of Game in determining the amounts reasonably necessary for subsistence for each game population or fish stock with a positive customary and traditional use finding. Since its inception in 1979, the Division of Subsistence has conducted comprehensive harvest assessment surveys in over 200 communities in Alaska. The information collected by the Division of Subsistence is also used in resource planning. Understanding the harvests of wild resources by communities throughout Alaska, especially the locations and timing of hunting, fishing, and gathering activities, allows a better assessment of the potential effects of development or regulation changes on local harvesting patterns. In Southeast Alaska, harvest assessment information has been approximately 20 years (or more) out of date for all communities, including Sitka.

PROJECT BACKGROUND

This project was funded through the Alaska State Legislature as one component of an overall index community program, the purpose of which is to develop and implement a program to monitor subsistence harvests of fish and wildlife in all areas of the state through a system of index communities. Maintaining a comprehensive and up-to-date database of subsistence harvests in order to fulfill the mission of the Division of Subsistence is increasingly challenging due to the diversity of harvest patterns across the state, the large number of rural communities, the vast distances between rural communities primarily off the road system, and the consequent high costs of conducting research. Due to the large number of communities in rural Alaska (approximately 300) and the high cost of conducting research, it is not possible to update comprehensive data for most communities on a regular basis. Therefore, the index community program was developed to explore the possibility of identifying a set of index communities within regional groups to represent all areas of the state. Comprehensive surveys would then be conducted on a regular, rotational schedule in the identified index communities, and results would be used to estimate total harvest in the regional area (based on relationships between regional villages and the index community) that the index communities represent. The first step in the development of this program is to update information from communities around the state that are out of date. In Southeast Alaska, the last comprehensive harvest update took place during 1996–1998, meaning that, for many communities, the harvest information is almost 20 years old. Table 1-2 identifies what types of surveys have been done in Southeast Alaska communities and for which years.

Funding was provided for 2 years of community harvest updates for Southeast Alaska. In 2013, the communities of Haines, Hoonah, Angoon, Whale Pass, and Hydaburg were surveyed for the 2012 study year (Sill and Koster 2017). In 2014, the community of Sitka was updated for the 2013 study year. Apart from filling a data gap for the index community program and general management needs, results of this study were used to address proposals put before the 2015 Board of Fisheries Southeast Alaska meeting and the 2015 Board of Game Southeast Alaska meeting.

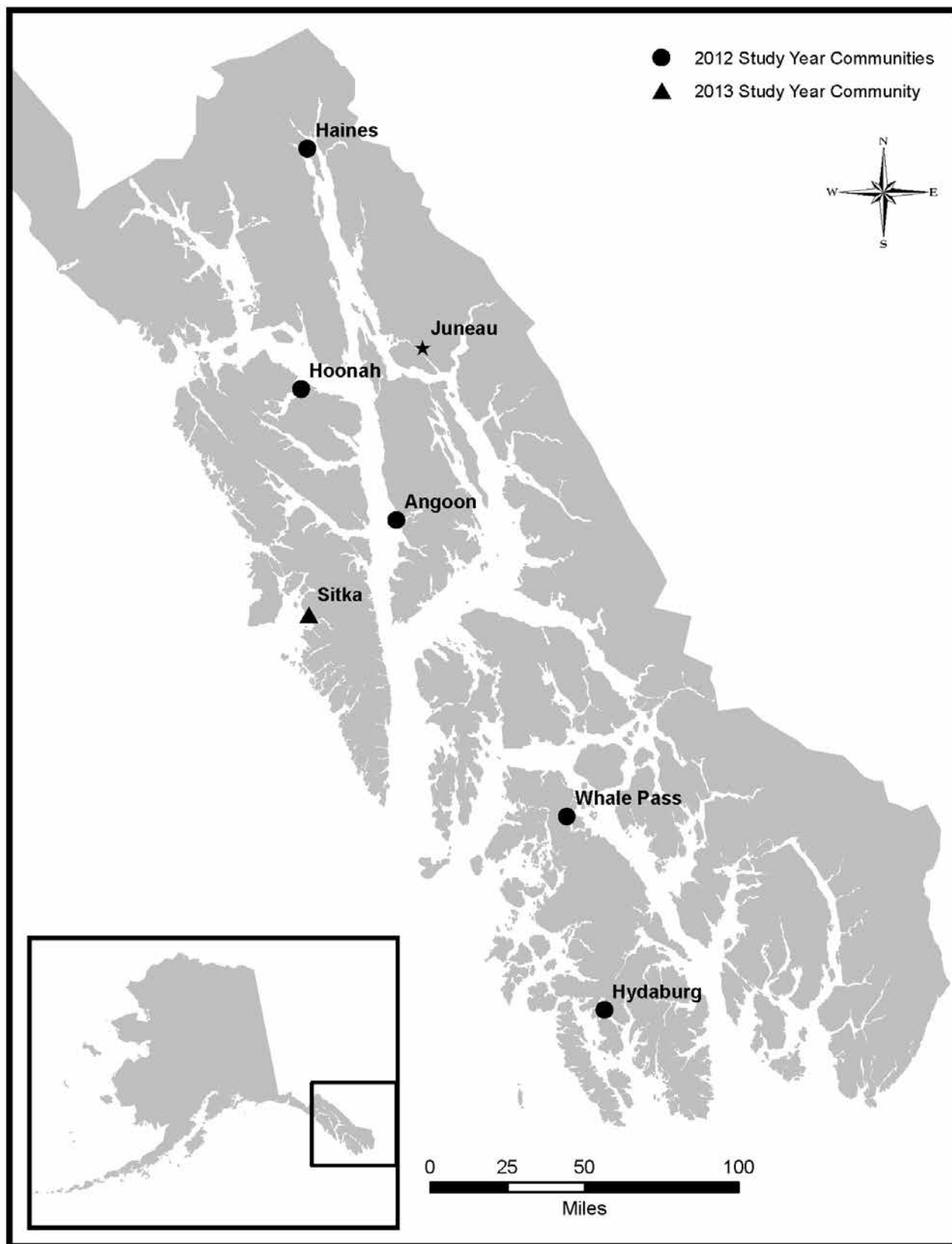


Figure 1-1.—Map of Southeast Alaska study community Sitka, 2013.

Table 1-1.—Species used by Sitka households, 2013.

Resource	Scientific name
Chum salmon	<i>Oncorhynchus keta</i>
Coho salmon	<i>Oncorhynchus kisutch</i>
Chinook salmon	<i>Oncorhynchus tshawytscha</i>
Pink salmon	<i>Oncorhynchus gorbuscha</i>
Sockeye salmon	<i>Oncorhynchus nerka</i>
Unknown salmon	<i>Oncorhynchus spp.</i>
Pacific herring	<i>Clupea pallasi</i>
Pacific herring roe/unspecified	<i>Clupea pallasi</i>
Pacific herring sac roe	<i>Clupea pallasi</i>
Pacific herring spawn on kelp	<i>Clupea pallasi</i>
Pacific herring roe on hair seaweed	<i>Clupea pallasi</i>
Pacific herring roe on hemlock branches	<i>Clupea pallasi</i>
Eulachon (hooligan, candlefish)	<i>Thaleichthys pacificus</i>
Silver smelt	
Pacific (gray) cod	<i>Gadus macrocephalus</i>
Pacific tomcod	<i>Microgadus proximus</i>
Flounder	
Lingcod	<i>Ophiodon elongatus</i>
Pacific halibut	<i>Hippoglossus stenolepis</i>
Perch	
Black rockfish	<i>Sebastes melanops</i>
Yelloweye rockfish	<i>Sebastes ruberrimus</i>
Quillback rockfish	<i>Sebastes maliger</i>
Dusky rockfish	<i>Sebastes ciliatus</i>
Copper rockfish	<i>Sebastes caurinus</i>
Unknown rockfish	
Sablefish (black cod)	<i>Anoplopoma fimbria</i>
Red Irish lord	<i>Hemilepidotus hemilepidotus</i>
Skates	
Sole	
Dolly Varden	<i>Salvelinus malma</i>
Cutthroat trout	<i>Oncorhynchus clarkii</i>
Rainbow trout	<i>Oncorhynchus mykiss</i>
Steelhead	<i>Oncorhynchus mykiss</i>
Unknown trout	
Unknown whitefishes	
Black bear	<i>Ursus americanus</i>
Brown bear	<i>Ursus arctos</i>
Caribou	<i>Rangifer tarandus</i>
Deer	<i>Odocoileus hemionus</i>
Elk	<i>Cervus canadensis</i>
Mountain goat	<i>Oreamnos americanus</i>
Moose	<i>Alces alces</i>
Dall sheep	<i>Ovis dalli</i>
Beaver	<i>Castor canadensis</i>
North American river (land) otter	<i>Lontra canadensis</i>
Marten	<i>Martes spp.</i>
Mink	<i>Neovison vison</i>
Red (tree) squirrel	<i>Tamiasciurus hudsonicus</i>
Least weasel	<i>Mustela</i>

-continued-

Table 1-1.–Page 2 of 3.

Resource	Scientific name
Harbor seal	<i>Phoca vitulina</i>
Unknown seal	
Sea otter	<i>Enhydra lutris</i>
Steller sea lion	<i>Eumetopias jubatus</i>
Unknown whale	
Unknown marine mammals	
Mallard	<i>Anas platyrhynchos</i>
Northern pintail	<i>Anas acuta</i>
Teal	<i>Anas spp.</i>
American wigeon	<i>Anas americana</i>
Unknown ducks	
Brant	<i>Branta bernicla</i>
Canada goose	<i>Branta canadensis parvipes</i>
White-fronted goose	<i>Anser albifrons</i>
Guillemot	<i>Cephus spp.</i>
Grouse	
Ptarmigan	<i>Lagopus spp.</i>
Abalone	<i>Haliotis kamtschatkana</i>
Black (small) chitons	<i>Katharina tunicata</i>
Butter clams	<i>Saxidomus gigantea</i>
Horse clams	<i>Simomactra planulata</i>
Pacific littleneck clams (steamers)	<i>Protothaca staminea</i>
Razor clams	<i>Siliqua spp.</i>
Unknown clams	
Basket (large) cockles	<i>Clinocardium nuttallii</i>
Heart (small) cockles	<i>Clinocardium ciliatum</i>
Unknown cockles	
Dungeness crab	<i>Cancer magister</i>
Brown king crab	<i>Lithodes aequispinus</i>
Red king crab	<i>Paralithodes camtschaticus</i>
Tanner crab	<i>Chionoecetes spp.</i>
Unknown crab	
Geoducks	<i>Panopea abrupta</i>
Limpets	<i>Patella vulgata</i>
Mussels	<i>Mytilus spp.</i>
Octopus	<i>Octopus vulgaris</i>
Oyster	
Weathervane scallops	<i>Patinopecten caurinus</i>
Rock scallops	<i>Crassadoma gigantea</i>
Sea cucumber	<i>Parastichopus californicus</i>
Green sea urchin	<i>Strongylocentrotus droebachiensis</i>
Red sea urchin	<i>Strongylocentrotus franciscanus</i>
Purple sea urchin	<i>Strongylocentrotus purpuratus</i>
Shrimp	
Squid	<i>Loligo opalescens</i>
Blueberry	<i>Vaccinium uliginosum alpinum</i>
Lowbush cranberry	<i>Vaccinium vitis-idaea minus</i>
Highbush cranberry	<i>Viburnum edule</i>
Crowberry	<i>Empetrum nigrum</i>

-continued-

Table 1-1.–Page 3 of 3.

Resource	Scientific name
Elderberry	<i>Sambucus racemosa</i>
Gooseberry	<i>Ribes oxycanthoides</i>
Currants	<i>Ribes spp.</i>
Huckleberry	<i>Vaccinium parvifolium</i>
Cloudberry	<i>Rubus chamaemorus</i>
Nagoonberry	<i>Rubus arcticus spp.</i>
Raspberry	<i>Rubus idaeus</i>
Salmonberry	<i>Rubus spectabilis</i>
Strawberry	<i>Fragaria virginiana</i>
Thimbleberry	<i>Rubus parviflorus</i>
Twisted stalk berry (watermelon berry)	<i>Streptopus amplexifolius</i>
Other wild berry	
Beach asparagus	<i>Salicornia virginica</i>
Goose tongue	<i>Plantago maritima</i>
Wild rhubarb	<i>Polygonum alaskanum</i>
Devil's club	<i>Echinopanax horridum</i>
Fiddlehead ferns	
Nettle	<i>Urtica spp.</i>
Hudson's Bay (Labrador) tea	<i>Ledum palustre</i>
Indian rice	<i>Fritillaria camschatcensis</i>
Mint	<i>Mentha spp.</i>
Salmonberry shoots	<i>Rubus spectabilis</i>
Skunk cabbage	<i>Lysichiton americanum</i>
Dandelion greens	<i>Taraxacum L.</i>
Spruce tips	<i>Picea spp.</i>
Wild celery	<i>Angelica lucida</i>
Wild rose hips	<i>Rosa acicularis</i>
Yarrow	<i>Achillea spp.</i>
Unknown mushrooms	
Fireweed	<i>Epilobium angustifolium</i>
Stinkweed	<i>Artemisia tilesii</i>
Unknown greens from land	
Black seaweed	<i>Porphyra abbottae</i>
Bull kelp	<i>Nereocystis luetkeana</i>
Red seaweed	<i>Palmaria hecatensis</i>
Sea ribbons	<i>Palmaria hecatensis</i>
Giant kelp (<i>macrocystis</i>)	<i>Macrocystis pyrifera</i>
Alaria	<i>Alaria marginata</i>
Bladder wrack	<i>Fucus Vesiculosus</i>
Unknown seaweed	
Wood	
Bark	
Spruce pitch	<i>Picea spp.</i>
Alder	<i>Alnus spp.</i>
Other wood	

Source ADF&G Division of Subsistence household surveys, 2014.

Table 1-2.—History of Southeast Alaska communities studied.

Community	Estimated number of households 2010 ^a	1983	1984	1985	1987	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2012	2013
Angoon	167		ALL		ALL	MM	ALL	MM	MM		MM	MM	MM	MM	MM	MM	MM	MM	MM	ALL	
Coffman Cove	89				ALL				ALL												
Craig	470				ALL	MM	MM	ALL	MM		MM	MM	MM	MM	MM	MM	MM	MM		MM	
Edna Bay	18				ALL				ALL												
Elfin Cove	13				ALL																
Game Creek CDP	7						ALL														
Gustavus	212				ALL																
Haines ^b	782	ALL			ALL	MM	ALL	MM	MM		MM	MM	MM	MM	MM	MM	MM	MM	MM	ALL	
Hollis	44				ALL				ALL												
Hoonah	305			ALL	ALL	MM	ALL	MM	MM		MM	MM	MM	MM	MM	MM	MM	MM	MM	ALL	
Hydaburg	128				ALL	MM	MM	ALL	MM		MM	MM	MM	MM	MM	MM	MM	MM		ALL	
Hyder	48				ALL																
Kake	213			ALL	ALL	MM	ALL	MM	MM		MM	MM	MM	MM	MM	MM	MM	MM	MM	MM	
Kasaan	23				ALL				ALL												
Klawock	297		ALL		ALL	MM	MM	ALL	MM	D	MM	MM	MM	MM	MM	MM	MM	MM	MM	MM	
Klukwan	41	ALL			ALL	MM	ALL	MM	MM		MM	MM	MM	MM	MM	MM	MM	MM		MM	
Metlakatla	493				ALL																
Meyers Chuck	^c				ALL																
Naukatu Bay	49								ALL												
Pelican	41				ALL	MM	MM	MM	MM		MM	MM	MM	MM	MM	MM	MM	MM	MM	MM	
Petersburg	1,252				ALL	MM	MM	MM	MM		ALL	MM	MM	MM	MM	MM	MM	MM	MM	MM	
Point Baker	8				ALL		ALL														
Port Alexander	22				ALL																
Port Protection	26				ALL		ALL														
Saxman	120				ALL	MM	MM	MM	MM	ALL	MM	MM	MM	MM	MM	MM	MM	MM	MM	MM	
Sitka	3,545				ALL	MM	ALL	MM	MM		MM	MM	MM	MM	MM	MM	MM	MM	MM	MM	ALL
Skagway	410				ALL																
Tenakee Springs	72		ALL		ALL																
Thorne Bay	214				ALL				ALL												
Whale Pass	20				ALL				ALL											ALL	
Whitestone Logging Camp	8						ALL														
Wrangell	1,053				ALL	MM	MM	MM	MM		ALL	MM	MM	MM	MM	MM	MM	MM		MM	
Yakutat	270		ALL		ALL	MM	MM	MM	MM		ALL	MM	MM	MM	MM	MM	MM	MM	MM	MM	

Note The key for the table is:

ALL = "comprehensive" baseline survey of all resources used for subsistence purposes; MM = marine mammals survey; and D = deer survey.

a. Source U.S. Census Bureau (2011).

b. In 2012, "Haines" included the city of Haines and the census designated place (CDP) of Mud Bay. The comprehensive harvest surveys for 1983 and 1996 included the city of Haines, Mud Bay CDP, Covenant Life CDP, Lutak CDP, Mosquito Lake CDP, and the remainder of the Haines Borough along the road system. The 1987 comprehensive harvest survey included the city of Haines and perhaps some limited adjacent areas, but not the entire road system population.

c. Meyers Chuck became part of the City and Borough of Wrangell in 2008 and is no longer its own census designated place (CDP); therefore, there are no census data for this community in 2010.

REGULATORY CONTEXT

Under the Alaska state constitution, any resident of the state is eligible to participate in subsistence hunting and fishing in the Sitka area, which, for fishing, includes state-managed District 13 waters, and, for hunting, is Game Management Unit 4 (state and federal designation). Through the Alaska National Interest Lands Conservation Act (ANILCA, PL 96-487), the federal government created a priority for rural residents to participate in federal subsistence hunting and fishing opportunities. In Southeast Alaska, this dual management can create a confusing regulatory structure because of the large amount of land and water under federal jurisdiction and subject to federal management. There are 2 state nonsubsistence areas in Southeast Alaska (Figure 1-2); one located around the community of Juneau (5 AAC 99.015(2)) and one around the community of Ketchikan (5 AAC 99.015(1)). Within these nonsubsistence areas, no subsistence fisheries or hunts can be authorized by the state's regulatory boards. None of the study communities for 2012 and 2013 are found within these nonsubsistence areas.

Fish are taken for use in the home under federal and state subsistence, state personal use, state sport, and state commercial regulations. Most fish taken in fresh waters are taken under a federal subsistence permit, while marine fish are mostly taken under state regulations and permits. The exception to this is subsistence-caught Pacific halibut, which may be taken only under federal subsistence regulations by residents of eligible rural communities and members of eligible tribes. In Southeast Alaska, a state subsistence permit is required for subsistence harvests of salmon, trout, Arctic char, Pacific herring spawn on kelp, sablefish, and also for eulachon caught in the Unuk River (5 AAC 01.730). A federal permit is required for taking salmon, trout, grayling, or char in federal waters.¹ Outside of the nonsubsistence areas, state subsistence fisheries are authorized where the Alaska Board of Fisheries (BOF) has made positive customary and traditional (C&T) use findings.² Where no such findings exist, personal use fisheries may be authorized.

For the Sitka area, principal salmon waters and streams used by Sitka fishers include Klag Bay–Lake Anna, Lake Stream–Ford Arm, Necker Bay, Redoubt Bay, Hoktaheen Cove, Falls Creek, and Redfish Bay (Naves et al. 2010). In 2013, the state season for subsistence sockeye salmon fishing for all Sitka locations opened June 1 and closed between July 13 and August 31 (Figure 1-3). The last areas to close in 2013 were Necker, Redfish, Redoubt, and Sitkoh bays. Possession and annual limits for sockeye salmon varied from 10 fish in possession and annually at Leo's Anchorage and Silver Bay to 100 fish in possession and annually at Necker Bay. In January 2003, the BOF adopted the *Redoubt Bay and Lake Sockeye Salmon Management Plan* (5 AAC 01.760). The plan provides a management approach for subsistence, sport, and commercial fisheries that target Redoubt Lake sockeye salmon, allowing the permit conditions for the fishery to change inseason by emergency order, either closing early or liberalizing bag limits. In 2013, the projected escapement for the season exceeded the upper end of the escapement goal so the state subsistence possession limit for sockeye salmon was increased to 25 fish with an annual limit of 100.³ Under federal regulations, harvest limits for sockeye salmon are the same as those in adjacent state subsistence or personal use fisheries.⁴

1. *Code of Federal Regulations*, Subsistence Management Regulations for Public Lands in Alaska, title 36, sec. 242.27.e.13.ii (2016).
2. In the Sitka area, positive C&T findings have been made for various fish stocks in the Southeastern Alaska Area (5 AAC 01.716). There are C&T findings for species in the waters of District 13, including along the western shore of Yakobi Island east of a line from Cape Spencer light to Surge Bay light; in waters in Section 13-C east of the longitude of Point Elizabeth; in waters of Section 13-A, and Section 13-B north of the latitude of Aspid Cape; as well as the waters of Section 13-A south of the latitude of Cape Edward, in waters of Section 13-B north of the latitude of Redfish Cape, and in waters of Section 13-C. More information about the finfish species for which there is a C&T finding in these waters is available online: <http://www.touchngo.com/iglcntr/akstats/aac/title05/chapter001/section716.htm>.
3. Alaska Department of Fish and Game. June 27, 2013. "Redoubt Bay and Lake Subsistence and Sport Sockeye Salmon Fishery Announcement," Region 1-Southeast News Release, <http://www.adfg.alaska.gov/sf/EONR/index.cfm?ADFG=region.NR&Year=2013&NRID=1807> (accessed October 2016).
4. *Code of Federal Regulations*, Subsistence Management Regulations for Public Lands in Alaska, title 36, sec. 242.27.e.13.xi (2016).

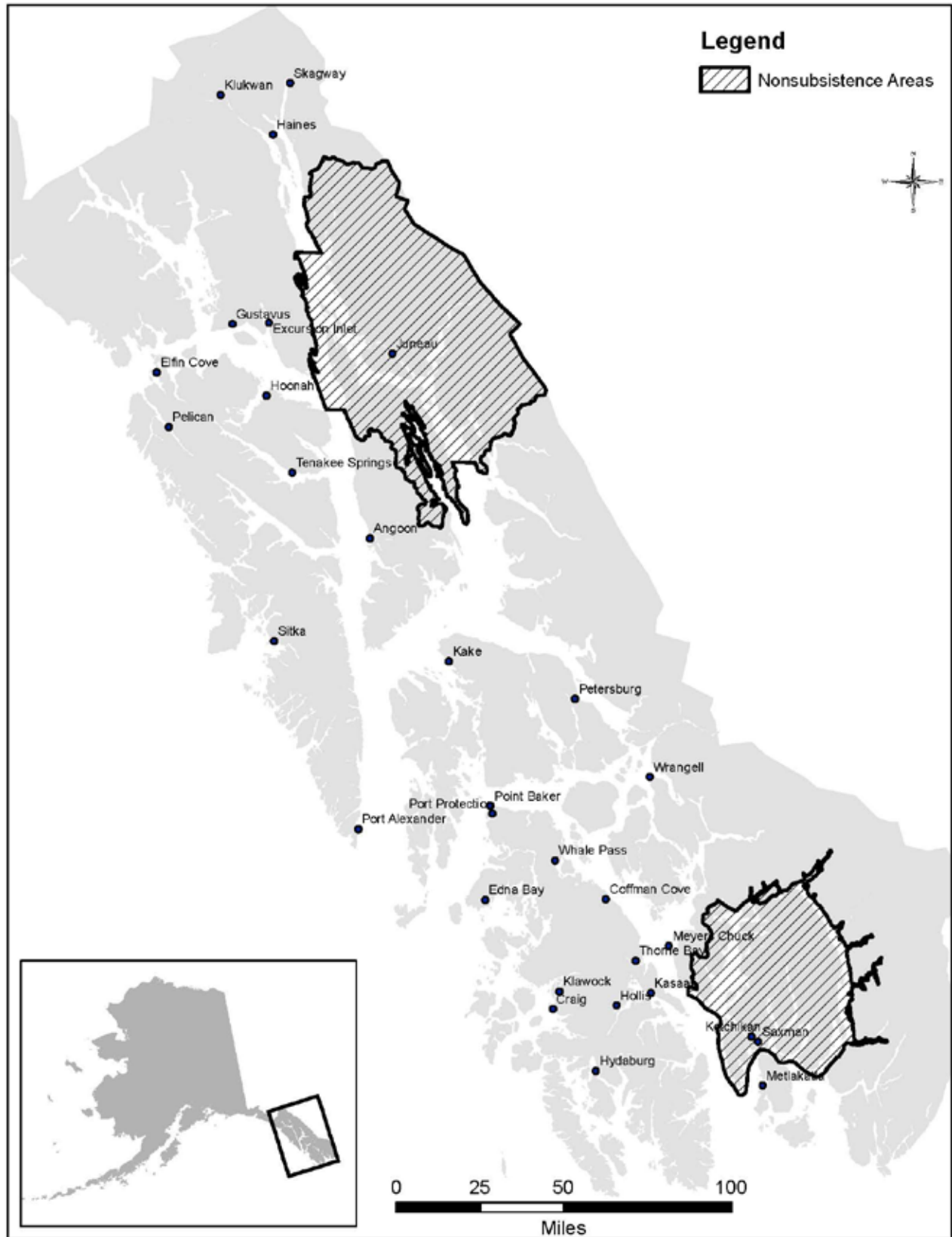


Figure 1-2.—Map of Southeast Alaska nonsubsistence areas.

Salmon streams flowing across or adjacent to the Sitka road system are closed to the use of nets under federal and state subsistence regulations; subsistence/personal use fishing for coho and chum salmon is also closed in these streams. The season for subsistence chum salmon was July 15–October 31, with a possession and annual limit of 50 fish (Figure 1-3). Coho salmon could be taken under state subsistence fishing permit conditions from August 16–October 31, except in heavily used bays which were open from September 1–October 31 with a possession limit of 20 fish and an annual limit of 40 fish. Pink salmon could be taken under state subsistence fishing permit conditions from July 15–September 30, with a possession limit of 50 fish and annual limit of 150. Under federal regulations, harvesters are limited to 20 coho salmon per day per household and there is no limit for pink or chum salmon.⁵

Allowable state subsistence gear for all areas except for Redoubt Bay included hand purse seines, beach seines, drift gillnets, dip nets, cast nets, gaffs, and spears (Figure 1-3). Drift gillnets could not exceed 50 fathoms (5 AAC 01.010 (c)). Cast nets were allowed in all areas except Redoubt Bay. In Redoubt Bay only, the use of rod and reel gear was allowed as subsistence gear and limitations listed in sport regulations applied to this gear (5 AAC 01.760). Portions of Falls Lake, Gut Bay, Silver Bay, and Indian River had closed areas and/or restricted gear types specified on the state permit (Figure 1-3). Federal regulations allow for all the authorized gear under state subsistence permits as well as the use of handlines or rod and reel.⁶

There is no authorized state subsistence fishery for Chinook salmon anywhere in Southeast Alaska; however, Chinook salmon taken incidentally under the conditions of most subsistence permits may be retained (5 AAC 01.730 (b)). A federal subsistence fishery for Chinook salmon occurs in the Stikine River.⁷ Under state regulations, rod and reel is not a legal gear type for subsistence harvests in Southeast Alaska, except in Redoubt Bay. Therefore, many of the residents in Southeast Alaska communities also harvest fish for home use under sport fishing regulations. Sport fishing regulations vary throughout the region, but generally set a maximum daily and annual possession limit for all species harvested. In addition, removing fish from a commercial catch for personal use is allowed under commercial fishing regulations and can provide a significant source of fish for some communities.

Since the majority of land in Southeast Alaska is federally owned, most hunts take place on federal land. State and federal regulations tend to mirror each other, though additional opportunity for local rural residents can be provided through federal regulations. Hunting in Southeast Alaska is limited through the use of bag limits, by animal size or sex restrictions, by limiting who can hunt through use of permits, and by specifying the length of the season. The least restrictive hunts tend to be for deer, which usually only require harvest tickets⁸ and have bag limits and possibly sex restrictions. Deer are available throughout Southeast Alaska, with the highest concentrations found on the many islands. Deer are also the most highly harvested game species in Southeast Alaska and the specific regulations concerning the hunting of deer vary by game management unit (GMU), depending on how the deer population is faring. State regulations for GMU 4 (which includes Admiralty, Baranof, and Chichagof islands) deer provide for an open season from August 1 through December 31 and limit of 4 deer; only bucks may be harvested from August 1–September 14, and bucks or does may be taken during the remainder of the season. Federal regulations for the same area provide an additional month of harvest (January) to qualified rural residents and an additional 2 deer of any sex. Other hunting opportunities in GMU 4 provided for under state and federal regulations include hunts for mountain goats and brown bears (registration permits required), wolves (though wolves are not found on Baranof Island), and wolverines, as well as migratory waterfowl and upland bird species, and hunting and trapping opportunities for small game and furbearers. Other land mammals accessible within Southeast

5. *Code of Federal Regulations*, Subsistence Management Regulations for Public Lands in Alaska, title 36, sec. 242.27.e.13.xiv–xv (2016).

6. *Code of Federal Regulations*, Subsistence Management Regulations for Public Lands in Alaska, title 36, sec. 242.27.e.13.iv (B) (2016).

7. *Code of Federal Regulations*, Subsistence Management Regulations for Public Lands in Alaska, title 36, sec. 242.27.e.13.xiii (2016).

8. The harvest ticket is used to report harvests to both the state and federal management agencies.

Alaska Department of Fish And Game
2013 Subsistence and Personal Use
Salmon Fishing Permit
(Authorization 5 AAC 01.730 and 5 AAC 77.682)
Sitka Management Area—Phone 747-6688

Name: _____ DOB: _____

Mailing Address: _____

Physical Address: _____

City/State/ZIP Code: _____

Telephone #: _____ # of Persons in Household: _____

Community of Principal Residence: _____

Alaska Residency
 (Actual number of years and months as a resident is required) _____ Years _____ Months
 Determination of Residency (AS 16.05.415.); a "resident" means, a person who is physically present in Alaska with the intent to remain indefinitely and make a home here, has maintained that person's domicile in Alaska for the 12 consecutive months immediately preceding this application for a permit, and is not claiming residency or obtaining benefits under a claim of residency in another state, territory, or country.

Other Members in household authorized to fish this permit:

Name: _____ Name: _____

Proxy: Authorized Alternate Person Fishing if permit holder is blind, has physical disabilities, or is 65 years of age or older as per 5 AAC 01.011 (g) (1) (A).

Name: _____ Phone #: _____

Mailing Address: _____

City/State/ZIP Code: _____

Any departure from the permit conditions and guidelines may only be done with permission from the Area Management Biologists in the Sitka ADF&G office.

Other as Specified: _____

Authorized By: _____

I understand that State of Alaska regulations are in effect, and I agree to abide by the permit conditions, harvest limits, seasons and to record daily harvests. I certify under penalty of perjury that to the best of my knowledge and belief the information I have provided on this permit application is true and correct. I understand that failing to comply with reporting requirements makes me ineligible to receive a permit during the following calendar year. (Note: Making a false statement, or omitting a material fact, is subject to a maximum penalty of \$10,000 or 1 year imprisonment, or both, per AS11.56.210.)

Permittee Signature (not valid until signed)

Date

Department Representative (not valid until signed)

Date of Issue

General Permit Conditions

- Only one permit will be issued to a household.
- The permittee shall abide by all appropriate subsistence and personal use fisheries regulations of the State of Alaska found in 5 AAC 01 (Subsistence Finfish) and in 5 AAC 77 (Personal Use Fishery).
- The permittee shall record harvests in numbers of fish for each day fished by species, gear type, and location directly on the harvest calendar on this permit, and before leaving the immediate vicinity where the harvest took place, even if no fish were harvested. (The immediate fishing area is defined as 100 feet from the area the fish were harvested.)
- This permit must be returned to ADF&G by November 10, 2013.**
- The permittee must adhere to the subsistence and personal use fishing guidelines listed on this permit by location and species including: possession limits, annual limits, and season open dates.
- When the department takes inseason action by emergency order to change open dates, open seasons, open areas, or possession limits by location, a news release will be issued announcing the changes. The permittee shall verify subsistence or personal use fishing guidelines in place before fishing by contacting the department or reviewing news releases issued.

Specific Permit Conditions

- This permit applies to the marine waters of Alaska and anadromous lakes and streams within the Sitka Management Area.
- Subsistence fishing for a particular species is authorized in areas with a positive customary and traditional (C&T) finding as defined under regulation. In the absence of C&T findings, personal use regulations apply
- In the Sitka Management Area the C&T use areas for pink, chum, coho, and chinook salmon include all waters of District 13, Section 9-A north of 56°25.6' N. latitude (Swaine Point), and Section 12-A along the Baranof and Catherine Island shorelines north of 57°14.75' N. latitude (Point Caution).
- In the Sitka Management Area the C&T use areas for sockeye salmon include Section 13-A on Yakobi Island north of Surge Bay Light and south of the latitude of Cape Edward, Section 13-B north of the latitude of Redfish Cape, Section 13-C, Section 9-A north of the latitude of Swaine Point, and Section 12-A along the Baranof and Catherine Island shorelines north of the latitude of Point Caution.
- Streams crossing the Sitka road system are closed to subsistence and personal use fishing for chum and coho salmon. Only dip net, gaff, spear, and cast net may be used. Pink salmon may be harvested from July 15-August 31. Indian River is closed to subsistence and personal use fishing downstream of the Sawmill Creek Road Bridge.
- Falls Lake marine waters are closed off the stream mouth as indicated by regulatory markers and Gut Bay marine waters are closed south of 56°42.37' N. lat. The season at Falls Lake has been divided into two open periods 6/1–7/13 and 7/23–8/15 unless closed by emergency order. Open dates are also shown in the table below.
- Gear authorized under this permit for State marine waters for all areas except Redoubt Bay includes the following: dip net, gaff, spear, hand operated purse seine, beach seine, cast nets, and drift gillnet. Gillnets may not be tied to shore, anchored or operated as set net gear.
- In Silver Bay (Salmon Lake) only dip net, gaff, spear, hand operated purse seine, and beach seine may be used. Hand operated purse seine, and beach seine gear is prohibited south of a line from 56°59.22' N. lat., 135°09.03' W. long. to 56°58.98' N. lat., 135°08.18' W. long., as defined by regulatory markers. Gillnets are prohibited.

☐ **Duplicate Permit**

- Redoubt Bay limits and season are subject to change around July 15.
- The household annual limit of 40 coho is for any combination of streams.
- Any departure from the permit conditions listed on this permit may only be done with written authorization by the ADF&G Area Management Biologists in Sitka.

SUBSISTENCE/PERSONAL USE SALMON FISHING GUIDELINES				
Salmon Species	Limits		Season Open Dates	Location
	Possession	Annual		
Sockeye	50	50	June 1–July 20	Hoktaheen Cove
	50	50	June 1–July 20	Takanis Bay*
	50	50	June 1–Aug. 15	Klag Bay, Surge Bay
	25	25	June 1–Aug. 15	Lake Anna, Ford Arm
	10	10	June 1–July 25	Leo's Anchorage
	10	10	June 1–July 31	Silver Bay (Salmon Lake)
	10	50	June 1–Aug. 31	Redoubt Bay**
	100	100	June 1–Aug. 31	Necker Bay
	50	50	June 1–July 31	Small Arm Whale Bay (Politofofski Lake)
	50	100	June 1–Aug. 31	Redfish Bay
Pink	50	50	June 1–Aug. 15	Hanus Bay (Lake Eva)
	50	50	June 1–Aug. 31	Sitkoh Bay
	10	20	June 1–July 20	Gut Bay
	25	25	June 1–July 13, & July 23–Aug. 15	Falls Lake and Bay***
	10	10	June 1–July 31	Falls Lake and Bay
	10	10	July 15–Sept. 30	Other (Unlisted) C&T Areas
	50	150	July 15–Sept. 30	C&T Areas within the Sitka Management Area except those sockeye systems listed above.****
	50	50	July 15–Oct. 31	C&T Areas within the Sitka Management Area except those sockeye systems listed above.****
	20	40	Aug. 16–Oct. 31	C&T Areas within the Sitka Management****
			Sept. 1–Oct. 31	Redoubt Bay, Necker Bay, Redfish Bay, Sitkoh Bay

*Takanis Bay sockeye are managed under Personal Use regulations and priority.
**For Redoubt Bay only initial limits and season are indicated.
Redoubt Bay limits and season subject to change around July 15.
***Note that season at Falls Lake is CLOSED 7/14–7/22 and after 8/15.
****C&T areas are specified under Specific Permit Conditions above.

Harvest Report: Record the number of fish caught daily on the back of this form.

Mark this box if you did not fish ☐

Figure 1-3.—Subsistence and personal use salmon fishing permit, Sitka Management Area, 2013.

Alaska include moose, black bears, and elk. These hunting opportunities require either a registration permit or a drawing permit to participate.

For this report, when discussing harvest patterns, authors refer to fisheries and hunts as they exist within the regulatory context. However, while conducting surveys and key respondent interviews, some residents referred to their harvesting patterns, regardless of the hunt or fishery, as subsistence. Some residents characterized their participation in harvest ticket deer hunts or rod and reel sport fisheries, for example, as subsistence, and these comments have been incorporated into the discussion.

STUDY OBJECTIVES

The project had the following objectives:

- Design a survey instrument to produce updated comprehensive baseline information about hunting, fishing, gathering, and other topics that is compatible with information collected in past household surveys for the study communities.
- Conduct community scoping meetings.
- Train local research assistants (LRAs) in administration of the systematic household survey.
- Conduct household surveys to record the following information:
 - Demographic information.
 - Involvement in use, harvest, and sharing of fish, wildlife, and wild plants during the study year.
 - Estimates of amount of resources harvested in the study year.
 - Information about employment and cash income.
 - Assessments of changes in wild resource harvest and use patterns compared to the past 5 years.
 - Location of fishing, hunting, and gathering activities in the study year.
- Collaboratively review and interpret study findings.
- Communicate study findings to the communities.
- Produce a final report.

RESEARCH METHODS

Ethical Principles for the Conduct of Research

The project was guided by the research principles outlined in the *Alaska Federation of Natives Guidelines for Research*⁹ and by the National Science Foundation, Office of Polar Programs in its *Principles for the Conduct of Research in the Arctic*¹⁰, the *Ethical Principles for the Conduct of Research in the North* (Association of Canadian Universities for Northern Studies 2003), as well as the Alaska confidentiality statute (AS 16.05.815). These principles stress community approval of research designs, informed consent, anonymity or confidentiality of study participants, community review of draft study findings, and the provision of study findings to each study community upon completion of the research.

Project Planning and Approvals

As noted above, funding for this project came from the Alaska State Legislature. Although all communities in Southeast Alaska are in need of updated harvest assessments, with limited funding it was only possible

9. Alaska Federation of Natives. 2013. "Alaska Federation of Natives Guidelines for Research." Alaska Native Knowledge Network. <http://www.ankn.uaf.edu/IKS/afnguide.html> (accessed February 25, 2014).

10. National Science Foundation Interagency Social Science Task Force. 2012. "Principles for the Conduct of Research in the Arctic." <http://www.nsf.gov/od/opp/arctic/conduct.jsp> (accessed February 25, 2014).

to survey a representative set of communities. Communities were chosen to maximize the finite amount of funds that were available for the index project goal of developing regional wild resource harvest and use estimates. In addition, communities were chosen to represent geographically, economically, and culturally diverse places in Southeast Alaska. Final project approval was granted by the Division of Subsistence Regional Program Manager and the Statewide Research Director. The entire project was carried out with Division of Subsistence staff, with the assistance of LRAs in each community (Table 1-3).

ADF&G staff Lauren Sill approached the community of Sitka to describe the survey and to gauge interest in survey participation. Phone conversations were held with the city and tribal organization. The city of Sitka assisted staff researchers with creating a comprehensive household list and discussed harbor liveaboard vessels. A cooperative agreement was signed with the Sitka Tribe of Alaska (STA) in April of 2014 to facilitate the hiring of local research assistants. Division of Subsistence research staff worked with Information Management staff to update the comprehensive wild foods survey for use in Southeast Alaska communities. Additional questions concerning health impact assessments were added to the survey at the request of researchers with the Department of Health and Social Services (DHSS) so as not to duplicate effort or increase interviewee fatigue. The results of this component of the survey will be reported in a publication by DHSS. The survey was reviewed by STA to ensure that no important species had been missed on the survey form.

Systematic Household Surveys

The primary method for collecting subsistence harvest and use information in this project was a systematic household survey. Following receipt of comments from STA, ADF&G finalized the survey instrument in January 2014. A key goal was to structure the survey instrument to collect demographic, resource harvest and use, and other economic data that are comparable with information collected in other household surveys in the study communities and with data in the Community Subsistence Information System (CSIS¹¹). Appendix A is an example of the survey instrument used in this project. In addition to the core harvest and use sections, additional questions were added concerning participation in subsistence, sport, and commercial fisheries in an attempt to better understand the changing role of fishing in the community; these data were submitted to Sitka Tribe of Alaska.

A random sample, stratified on tribal membership, was employed for survey administration. To define which households were eligible for survey administration, the geographic area was defined as the Sitka road system and the adjacent islands. The city and borough of Sitka includes the majority of Baranof Island, including the communities of Baranof Warm Springs, Port Armstrong, and Port Walter, but excluding the city of Port Alexander, as well as encompassing half of Chichagof Island to the north. The outlying communities within the borough were not included in this survey. A household list of all likely households in Sitka was created with the help of city and tribal staff, the harbormaster's knowledge of liveaboards, a listing of residential power customer addresses, the city's geographic information system (GIS) planning files, and extensive groundtruthing. This resulted in a revised initial estimate of 3,527 households within the determined boundary for survey administration (Table 1-4).¹² A list of all tribal households living in Sitka was obtained from STA, with a revised initial estimate of 893 households, resulting in a revised total of 2,634 households on the non-tribal sample list. Because both lists were based on physical addresses, there were times during survey administration when, after contacting a household, staff discovered that the household was included on the incorrect list (i.e., a household believed to belong to the STA household list actually had no tribal members living in it). When this occurred, the household was not surveyed at that time; it was taken off the incorrect list, and added to the correct list. A revised estimate of 601 tribal households and 2,364 general households was estimated, or 2,965 households in Sitka overall. A random

11. ADF&G Community Subsistence Information System: <http://www.adfg.alaska.gov/sb/CSIS/>. Hereinafter cited as CSIS.

12. As noted on Table 1-4, there were 2 households in this sample, 1 from each strata group, that were identified as having unique harvest patterns and were not expanded within the respective strata groups, which affects sample achievement data and harvest estimates.

Table 1-3.—Project staff.

Task	Name	Organization
Project design and management	James A. Fall, Davin Holen	ADF&G Division of Subsistence
Principal investigator	Lauren A. Sill	ADF&G Division of Subsistence
Data management lead	David Koster	ADF&G Division of Subsistence
Data management assistant	Theresa M. Quiner	ADF&G Division of Subsistence
Data management support	Megan Hellenthal	ADF&G Division of Subsistence
Administrative support	Jennifer Bond	ADF&G Division of Subsistence
	Maegan Smith	ADF&G Division of Subsistence
Programmer	Garrett Zimpelman	ADF&G Division of Subsistence
Data entry	Margaret Cunningham	ADF&G Division of Subsistence
	Theresa M. Quiner	ADF&G Division of Subsistence
	Zayleen Kalalo	ADF&G Division of Subsistence
	Barbara Dodson	ADF&G Division of Subsistence
	Maegan Smith	ADF&G Division of Subsistence
	Nicholas Jackson	ADF&G Division of Subsistence
	Anita Humphries	ADF&G Division of Subsistence
	Margaret Cunningham	ADF&G Division of Subsistence
	David Koster	ADF&G Division of Subsistence
	Garrett Zimpleman	ADF&G Division of Subsistence
Cartography	Lauren A. Sill	ADF&G Division of Subsistence
Editorial review lead	Mary Lamb	ADF&G Division of Subsistence
Production lead	Mary Lamb	ADF&G Division of Subsistence
Field research staff	Lauren A. Sill	ADF&G Division of Subsistence
	Jennifer Bond	ADF&G Division of Subsistence
	Rosalie A. Grant	ADF&G Division of Subsistence
	Theodore M. Krieg	ADF&G Division of Subsistence
	Joshua T. Ream	ADF&G Division of Subsistence
	Maegan Smith	ADF&G Division of Subsistence
	Margaret Cunningham	ADF&G Division of Subsistence
	Hannah Z. Johnson	ADF&G Division of Subsistence
	Eric Schacht	ADF&G Division of Subsistence
	Dustin Murray	ADF&G Division of Subsistence
Local research assistants	Pete Karras	Sitka
	Leota Bagby	Sitka
	Jessica Gill	Sitka Tribe of Alaska
	Kitty Sopow	Sitka Tribe of Alaska
	Heather Riggs	Sitka Tribe of Alaska
	Courtney Johnson	Sitka Tribe of Alaska
	Kerry MacLane	Sitka

Table 1-4.—Estimated households and sample achievement, Sitka, 2013.

Sample information	Tribal sample	Non-tribal sample	Overall sample
Initial estimate of households	889	2,562	3,451
New households	4	72	76
Revised initial estimate of households	893	2,634	3,527
Interview goal	100	100	200
No contact	47	51	98
Interviewed	102	110	212
Refused	32	23	55
Total contacts ^a	135	142	277
Reported ineligible households			
Non-resident	1	9	10
Vacant	14	12	26
Moved	0	2	2
Deceased	2	0	2
Tribal membership corrected	71	4	75
Uninhabitable structure	21	5	26
Estimated percentage of ineligible households			
Non-resident	4.8%	6.5%	11.3%
Vacant	4.8%	5.6%	10.4%
Deceased	0.7%	0.0%	0.7%
Tribal membership corrected	24.5%	1.9%	26.4%
Uninhabitable structure	7.2%	2.3%	9.5%
Initial estimate of eligible households	558	2,217	2,775
Adjustment for tribal or non-tribal households not on list	43	147	190
Final estimate of eligible households	601	2,364	2,965
Final sample achievement	17.0%	4.7%	7.2%

Source ADF&G Division of Subsistence household surveys, 2014.

Note Two households in this sample, 1 from each strata group, were identified as having unique harvest patterns and were not expanded within the respective strata groups.

a. "Total contacts" include households refusing survey participation, households classified as ineligible based on residency, and households surveyed.

sample of 100 households was attempted from each list. The sample was drawn by 10 households at a time using a Microsoft Access¹³ database, so as names were added to respective lists, they were eligible to be included in the next group drawn. A total of 212 households were surveyed (7% of all Sitka households), or 102 tribal households and 110 general households (Table 1-4).

13. Product names are given because they are established standards for the State of Alaska or for scientific completeness; they do not constitute product endorsement.

Table 1-5.—Survey duration, Sitka, 2013.

Community	Interview length (in minutes)		
	Average	Minimum	Maximum
Sitka	44	10	150

Source ADF&G Division of Subsistence household surveys, 2014.

For every household that was selected for a survey, staff contacted the household and a survey was attempted on at least 3 occasions. If a reasonable effort was made to contact the household at least 3 times—on different days and at different times—with no success, then the household was coded a “no contact” and staff attempted to contact the next household on the list. The sampling database was provided to the research team by Information Management lead David Koster. When the first 10 households on each list were exhausted, 10 more names were added to the lists. This was repeated until the survey sample targets were achieved. To conduct the survey, an LRA worked with an ADF&G staff member. Table 1-5 shows the length of the interviews; on average, surveys took approximately 45 minutes, ranging from 10 minutes to 150 minutes.

Mapping Locations of Subsistence Hunting, Fishing, and Gathering Activities

During household interviews, the researchers asked respondents to indicate the locations of their hunting, fishing, and gathering activities during the study year. In addition, interviewers asked the respondents to mark on the maps the sites of each harvest, the species harvested, the amounts harvested, and the months of harvest. ADF&G staff established a standard mapping method. Points were used to mark harvest locations and polygons (circled areas) were used to indicate harvest effort areas, such as areas searched while hunting moose. Some lines were also drawn when the harvesting activity did not occur at a specific point; for example, lines were used to depict traplines or courses taken while trolling for fish.

Harvest locations and hunting and gathering areas were documented in one of 2 ways. One method used an application designed on the ArcGIS Runtime SDK for iOS platform; basically a mapping data collection application for Apple iPad, the device used to collect the data. The point, polygon, or line was drawn on a U.S. Geological Survey (USGS) topographic relief map downloaded on the iPad. The iPad allowed the user to zoom in and out to the appropriate scale, and the ability to document harvesting activities wherever they occurred in the state of Alaska. Once a feature was accepted, an attribute box was filled out by the researcher that noted the species harvested, amount, method of access to the resource, and month(s) of harvest. The data were uploaded via Wi-Fi to a server. Once data collection was complete, the data were downloaded into an ArcGIS file geodatabase. The application was developed by HDR, Inc., an environmental research firm located in Anchorage. The second method of documenting harvest locations and hunting and gathering areas was with the use of paper maps. The maps used in Sitka consisted of a set of, at a minimum, 3 maps: 1) a map covering the larger area at a scale of 1:1,000,000; 2) a map covering the general area around the community at a scale of 1:500,000; and 3) a map covering the immediate area around the community at a scale of 1:250,000. The maps were produced by Division of Subsistence staff using ArcGIS 10.0 software on 11-in by 17-in paper and displayed a USGS topographic relief. Maps were organized by writing the community identification number, the household identification number, the survey date, and the interviewer’s initials. Very few paper maps were used and research staff digitized markings on paper maps using the iPad application while in the field.

Once a survey was complete researchers conducted a quality control exercise by matching the map data to the survey form to ensure all map data had been documented. This was completed in the field before the surveys were submitted to the community lead researcher. Once the data had been uploaded, researchers also verified that the household data were logged into the server.

At the end of the field season the geodatabase was turned over to ADF&G for map production. Maps were produced at the species-specific level for most resource categories.

Household Survey Implementation

ADF&G staff Lauren Sill and Davin Holen began speaking to the Resources Protection department at STA during spring 2013 about conducting household surveys. A cooperative agreement was signed in December 2013. LRA training occurred at the University of Alaska Southeast Sitka campus on February 5, 2014. Davin Holen and Lauren Sill were interviewed on the local radio station on February 7 about the surveys. The main survey effort lasted from February 6 through February 24 by ADF&G staff Rosalie Grant, Lauren Sill, Margaret Cunningham, Ted Krieg, Josh Ream, Maegan Smith, and Jennifer Bond. The work was supported by several LRAs: Pete Karras, Leota Bagby, Jessica Gill, Kitty Sopow, Courtney Johnson, Kerry MacLane, and Heather Riggs. After the main survey effort ended, there were still a few remaining surveys to be completed; these were conducted between March 28 and April 1 by ADF&G staff Sill, Grant, Ream, and Dustin Murray, as well as several of the LRAs. The size of the community and stratified nature of the survey sample delayed completion of surveys. Also, it was difficult to find people at home, and, occasionally, once the household was contacted, it was sometimes discovered that the household was on the wrong sample list and could not be surveyed. Overall, this caused the survey effort to be more protracted than anticipated.

DATA ANALYSIS AND REVIEW

Survey Data Entry and Analysis

All data were coded for data entry by Division of Subsistence staff in Juneau and Anchorage. Survey coding was reviewed by the principal investigator for consistency. Responses were coded following standardized conventions used by the Division of Subsistence to facilitate data entry. Information Management staff within the Division of Subsistence set up database structures within Microsoft SQL Server at ADF&G in Anchorage to hold the survey data. The database structures included rules, constraints, and referential integrity to ensure that data were entered completely and accurately. Data entry screens were available on a secured internet site. Daily incremental backups of the database occurred, and transaction logs were backed up hourly. Full backups of the database occurred twice weekly. This ensured that no more than 1 hour of data entry would be lost in the unlikely event of a catastrophic failure. All survey data were entered twice and each set compared in order to minimize data entry errors.

Once data were entered and confirmed, information was processed with the use of Statistical Package for the Social Sciences (SPSS) software, version 21. Initial processing included the performance of standardized logic checks of the data. Logic checks are often needed in complex data sets where rules, constraints, and referential integrity do not capture all of the possible inconsistencies that may appear. Harvest data collected as numbers of animals, or in gallons or buckets, were converted to pounds usable weight using standard factors (see Appendix B for conversion factors).

ADF&G staff also used SPSS for analyzing the survey information. Analyses included review of raw data frequencies, cross tabulations, table generation, estimation of population parameters, and calculation of confidence intervals for the estimates. Missing information was dealt with on a case-by-case basis according to standardized practices, such as minimal value substitution or using an averaged response for similarly-characterized households. Typically, missing data are an uncommon, randomly-occurring phenomenon in household surveys conducted by the division. In unusual cases where a substantial amount of survey information was missing, the household survey was treated as a “non-response” and not included in community estimates. ADF&G researchers documented all adjustments.

Harvest estimates and responses to all questions were calculated based upon the application of weighted means (Cochran 1977). These calculations are standard methods for extrapolating sampled data. Since Sitka was sampled in multiple strata, each stratum is expanded separately. As an example, the formula for harvest expansion is:

$$H_i = \bar{h}_i S_i \quad (1)$$

where:

$$\bar{h}_i = \frac{h_i}{n_i} \quad (2)$$

H_i = the total estimated harvest (numbers of resource or pounds) for each stratum i ,

\bar{h}_i = the mean harvest per returned survey for strata i ,

h_i = the total harvest reported in returned surveys for strata i ,

n_i = the number of returned surveys, and

S_i = the number of households in a community.

In order to obtain the total community estimate, the estimate for each strata is added, as represented by,

$$X = \sum_{i=1}^z H_i$$

Where:

z = the total number of strata in the community,

X = the total community harvest estimate.

As an interim step, the standard deviation (SD) (or variance [V], which is the SD squared) was also calculated with the raw, unexpanded data. The standard error (SE), or SD of the mean, was also calculated for the community. This was used to estimate the relative precision of the mean, or the likelihood that an unknown value would fall within a certain distance from the mean. In this study, the relative precision of the mean is shown in the tables as a confidence limit (CL), expressed as a percentage. Once SE was calculated, the CL was determined by multiplying the SE by a constant that reflected the level of significance desired, based on a normal distribution. The constant for 95% confidence limits is 1.96. Though there are numerous ways to express the formula below, it contains the components of a SD, V, and SE:

$$C.L. \%(\pm) = \frac{t_{\alpha/2} \sqrt{\frac{1}{N^2} \sum_{i=1}^z N_i (N_i - n_i) \frac{s^2}{n_i}}}{\bar{x}} \quad (3)$$

where:

s = sample standard deviation,

n = sampled households,

N = total number of households in the community,

z = the total number of strata in the community,

$t_{\alpha/2}$ = student's t statistic for alpha level ($\alpha=.95$) with $n-1$ degrees of freedom, and

\bar{x} = mean.

Small CL percentages indicate that an estimate is likely to be very close to the actual mean of the sample. Larger percentages mean that estimates could be further from the mean of the sample.

The corrected final data from the household survey will be added to the Division of Subsistence CSIS. This publicly-accessible database includes community-level study findings.

Population Estimates and Other Demographic Information

As noted above, a goal of the research was to collect demographic information for a sample of all year-round households in Sitka. For this study, “year-round” was defined as being domiciled in the community when the surveys took place and for at least 3 months during the study year 2013. Because not all households were interviewed, population estimates were calculated by multiplying the average household size of interviewed households by the total number of year-round households, as identified by Division of Subsistence researchers in consultation with community officials and other knowledgeable respondents.

There may be several reasons for the difference among the population estimates for the community generated from the division’s surveys and other demographic data developed by the 2010 federal census (U.S. Census Bureau 2011), the U.S. Census Bureau’s American Community Survey (U.S. Census Bureau n.d.), and the Alaska Department of Labor and Workforce Development (ADLWD n.d.). Sampling of households, depending on when surveys are conducted or eligibility criteria for inclusion in the survey, may explain differences in the population estimates.

Map Data Entry and Analysis

As discussed above, maps were generated based on data collected using an iPad or on 11-in by 17-in paper maps. All data were entered on the iPad, whether in the field during interviews or by ADF&G research staff while coding survey data. Map features were matched to the survey form to ensure that all harvest data were recorded accurately. Once all data were entered, an ArcGIS file geodatabase was downloaded by ADF&G researchers from the server and maps showing harvest locations for each species created in ArcGIS 10.3 using a standard template for reports. Maps show harvest areas for fish species, harvest areas for plants, berries, wood, and birds, and hunting areas for land mammals. To ensure confidentiality, harvest locations for large land mammals are not produced for the report.

Food Security Analysis

A “food security” section of the survey used a standard national questionnaire to assess whether or not the household had enough food to eat, whether from subsistence sources or from market sources. The protocol used in this survey was a modified version of the 12-month food security scale questionnaire developed by the U.S. Department of Agriculture (USDA). This questionnaire is administered nationwide each year as part of the annual Current Population Survey (CPS). In 2007, approximately 125,000 U.S. households were interviewed, including 1,653 in Alaska (Nord et al. 2008). From CPS data, the USDA prepares an annual report on food security in the United States.

Food security protocols have been extensively reviewed (Coates 2004; Webb et al. 2006; Wunderlich and Norwood 2006) and have been used around the world, including in northern Burkina Faso (Frongillo and Nanama 2006), Bangladesh (Coates et al. 2006), Bolivia and the Philippines (Melgar-Quinonez et al. 2006), and Brazil (Pérez-Escamilla et al. 2004). Although there have been efforts to develop a universal food security measurement protocol (Swindale and Bilinsky 2006), researchers often modify the protocol slightly to respond to community social, cultural, and economic circumstances, as was done here.

For this study, the food security protocol was modified by the addition of several questions designed to determine whether food insecurities, if any, were related to subsistence foods or store-bought foods. Additionally, the wording of some questions was changed slightly. As in Brazil (Pérez-Escamilla et al. 2004), the USDA term “balanced meals” was difficult to interpret for indigenous Alaska populations, and was replaced with the term “healthy meals” to reflect unique dietary and cultural circumstances in rural Alaska.

Community Review of Draft Results

The principal investigator reviewed preliminary survey findings for estimated harvests and uses of wild resources and associated search area and harvest maps with selected community residents, both tribal and non-tribal affiliated, who are knowledgeable about harvest and use patterns in Sitka. As a result of these conversations, the expansion factor used to estimate the total harvest of marine mammals in Sitka was adjusted to more accurately reflect harvesting patterns of marine mammals and the overall harvest amount. Staff of the Sitka Tribe of Alaska reviewed the draft final report; no changes to the report were made as a result of this review.

FINAL REPORT ORGANIZATION

This report summarizes the results of systematic household surveys and mapping interviews conducted by ADF&G staff and LRAs in Sitka, and the report also summarizes resident feedback provided at the time surveys were administered and when survey results were reviewed with selected community members. The following chapter begins with background information on Sitka's history and current setting followed by discussion of tables and figures that report findings on demographic characteristics, employment characteristics, individual participation in harvesting and processing of wild resources, and characteristics of resource harvests and uses—including the sharing of wild foods—and food security, and also harvest and use trends over time. In Sitka, there is comprehensive harvest data collected for 1987 and 1996 that the 2013 data can be compared to. Each study year used similar physical boundaries for survey administration, but some differences occurred in the definition of study year and the mapping methods. These differences will be discussed in full in the following chapter. The chapter concludes with a summary of concerns that residents shared regarding wild resources and harvesting practices.

Because of the large number of maps of hunting, fishing, and gathering areas used in 2013, selected maps are included in the results chapter and the remaining maps are published as Appendix C, "Search and Harvest Area Maps."

After the report was finalized, ADF&G mailed a short (4-page) summary of the study findings to the Sitka Tribe of Alaska and the City of Sitka offices to be distributed to community members (Appendix D).

2. SITKA

COMMUNITY BACKGROUND

The community of Sitka is located on the western side of Baranof Island in Southeast Alaska, approximately 95 air miles southwest of Juneau. Baranof Island is characterized by rugged mountainous terrain and covered by dense rainforests of Sitka Spruce and western hemlock, with a shoreline of more than 600 miles. The community is situated on the shores of Sitka Sound; inland from the community, mountains rise sharply to the east and to the west, and across Sitka Sound, on Kruzof Island, the dormant volcano, Mount Edgecumbe, rises 3,200 feet above the community. Sitka has a maritime climate with mild winters, cool summers, and abundant precipitation.

The Tlingit people have lived in the Sitka area for thousands of years. The name of Sitka comes from *Shee At'ika*, the name of the original Tlingit settlement that means “People on the Outside of Shee” (Baranof Island).¹ Traditionally, the Tlingit of Sitka used a wide geographic area around the community for hunting, fishing, and gathering wild resources (Goldschmidt and Haas 1998). The rich coastal resources of the area, especially the sea otter, attracted traders of many nationalities. Russian explorers landed in Alaska in 1741 and realized their Siberian fur trade could be expanded to this new territory. By 1799, the Russian American Company had consolidated a monopoly on trade in sea otter furs and negotiated with Sitka Tlingit to establish a trading post a few miles north of present-day Sitka. The company made Sitka (then called New Archangel) the headquarters of its vast fur trading business.²

Escalating conflicts between the Native peoples of Southeast Alaska and the Russians led to a series of attacks between the two sides. The Russian fort at Sitka was destroyed in 1802. Baranov, the Chief Manager of the Russian American Company, retaliated in 1804 (Dauenhauer et al. 2008). The Tlingit were outnumbered and fled to Angoon, though both sides suffered casualties during the conflict. It was the last major stand by the Tlingit against the Russians, but open conflict continued elsewhere.³ The Tlingit people did not return to Sitka until 1821. The Russians made New Archangel the capital of Russian America by 1808. While tensions remained high and conflicts continued, trade and cultural exchange with the Russians also carried on.

During the mid-1800s, Sitka was the major port on the north Pacific coast, with a lighthouse, sawmill, foundries, flour mill, and a boatyard. Ships from many nations called at the port, bringing supplies to the Russians and leaving with furs, salmon, and lumber. Sitka remained the major center of Russian settlement and activity until Alaska was purchased by the United States in 1867.

Sitka was the capital of the American territory until 1906, when the capital was moved to Juneau. One of the major economic drivers after the territorial capital move was based on fisheries (Himes-Cornell et al. 2013). The development of refrigeration opened new markets for fish, leading to the opening of the first cold storage plant in 1913, which processed salmon, Pacific halibut, crab, and black cod. A cannery had been established in Sitka in 1878, one of the first in the state, but it only operated for 2 seasons. Several more canneries opened around 1918 in Sitka, Peril Strait, and Sitkoh Bay. Whaling flourished for several years but ended in 1923. A shark fishery also existed in Sitka until World War II.

Another economic driver was timber. Logging operations began in Sitka during Russian occupation, but modern growth of the industry didn't begin until 1959 when the Alaska Lumber and Pulp Company opened

1. National Park Service, n.d., “The Tlingit,” Sitka National Historical Park, Alaska, <https://www.nps.gov/sitk/learn/historyculture/the-tingit.htm> (accessed September 2016).

2. National Park Service, n.d., “The Russians,” Sitka National Historical Park Alaska, <https://www.nps.gov/sitk/learn/historyculture/the-russians.htm> (accessed September 2016).

3. For a thorough discussion on conflicts between the Sitka Tlingit and Russians, see Dauenhauer et al. (2008).

a large pulp mill in Sitka. The mill operated continuously until 1993.⁴ Other important elements of Sitka's economic growth was involvement in World War II with a Navy air base built on Japonski Island, the creation of Mount Edgecumbe boarding school, and the expansion of the U.S. Coast Guard facilities in 1977 in support of the new 200-mile fisheries limit. In 1878, a Presbyterian missionary named Sheldon Jackson started a school intended to be used as an Industrial and Training School for Alaska Natives. The training college became the Sheldon Jackson School in 1911, then a junior college in 1944, and finally started offering 4-year degrees in 1967. In 2007, the college closed due to financial difficulties. The Sitka Fine Arts Camp now owns the campus.

Currently, Sitka is the third largest community in Southeast Alaska, with a heterogeneous population and a mixed economic base. It is part of the unified city and borough of Sitka, which encompasses the majority of Baranof Island, half of Chichagof Island to the north, and the islands along the coast. The city was incorporated in 1913. The Greater Sitka Borough was created in 1963, and the home rule charter of the City and Borough of Sitka was adopted in 1971. The city of Port Alexander detached from the borough in 1973. Sitka Tribe of Alaska is the federally recognized Alaska Native Claims Settlement Act (ANCSA) tribe. Shee Atika is the village corporation.

The current economy is diversified with fishing, fish processing, tourism, government, transportation, retail, and healthcare services. There is a state-owned airport on Japonski Island that has daily jet service to Juneau and Anchorage, as well as Seattle. In addition, several air taxis, air charters, and helicopters are available. The City and Borough of Sitka operates a seaplane base on Sitka Sound, as well as 5 small boat harbors. A boat launch, haul-out, boat repairs, and other services exist. Sitka is a port of call for cruise ships coming through the Inside Passage; ships anchor in the harbor and lighter visitors to shore. There is an Alaska Marine Highway System dock 6 miles north of town. The ferry serves Sitka 5 times per week in the summer and 3 times per week in the winter. Freight arrives by barge and cargo plane. There is a U.S. Post Office in town. Water is drawn from Indian River and a reservoir on Blue Lake, and is treated and piped to nearly all homes in Sitka. Hydroelectric facilities have been built at Blue Lake and Green Lake, as well as a diesel-fueled generator at Indian River. Law enforcement services are provided by the borough police department and a local state trooper post. Fire and rescue services are provided by the Sitka Fire Department, the Southeast Alaska Regional Health Consortium (SEARHC) Air Medical, and the U.S. Coast Guard Air Station/Medevac. There are 2 hospitals in town. Sitka also boasts 2 movie theaters, 5 museums, a public library, 7 schools (serving K–12 grades), and 3 grocery stores.

POPULATION ESTIMATES AND DEMOGRAPHIC INFORMATION

This study estimated the 2013 population of Sitka at 7,873 people living in 2,965 households (Table 2-1). The 2010 U.S. Census Bureau estimated that 8,881 residents were living in 3,545 households in 2010. The most recent 5-year American Community Survey (ACS), from 2009–2013, estimated Sitka's population at 8,945 individuals in 3,554 households. As estimated by these same sources, approximately 25% of the population of Sitka identifies as Alaska Native (Table 2-1; Figure 2-1). Some sources of potential differences among population estimates come from the methods of survey administration and the time of the year that the estimates were made. This study was conducted in February and March, prior to the seasonal influx of residents associated with the tourism industry and other summer residents.

4. Sitka Economic Development Association. 2013, "Gary Paxton Industrial Park: The Evolution of a Marine Industrial Park," <http://www.sawmillcove.com/Park/History.html> (accessed September 2016).

Table 2-1.—Population estimates, Sitka, 2010 and 2013.

	Census (2010)	5-year American Community Survey (2009–2013)		This study (2013)	
		Estimate	Range ^a	Estimate	Range ^b
Total population					
Households	3,545	3,554.0	3,395 – 3,713	2,965.0	
Population	8,881	8,945.0	NA	7,873.2	7,173 – 8,573
Alaska Native					
Population	2,184	2,214.0	2,137 – 2,291	1,961.2	1,520 – 2,402
Percentage	24.6%	24.8%		24.9%	

Sources U.S. Census Bureau (2011) for 2010 estimate; U.S. Census Bureau for American Community Survey (ACS) 2013 estimate (5-year average); and ADF&G Division of Subsistence household surveys, 2014, for 2013 estimate.

Note Division of Subsistence household survey eligibility requirements differ from those used by (ACS).

Note "NA" indicates the range is not available. The ACS total population estimate is controlled. A statistical test for sampling variability is not appropriate.

a. ACS data range is the reported margin of error.

b. No range of households is estimated for division surveys.

Based on the decennial census, Sitka grew throughout much of the 20th century, with the most rapid growth occurring in the 1970s before slowing down through the 1990s (Figure 2-2). Since the turn of the century, the estimated population has remained stable. From the 1950s on, Sitka experienced growth in natural resources industries, such as logging and the development of the pulp mill and domestic fisheries. The U.S. Coast Guard base expanded its presence in the community during this time as well.

For this study, researchers surveyed 212 randomly-selected households (Table 2-2). From this sample, several demographic characteristics of the community were estimated. The average household size was 2.7 people, with a minimum size of 1 person and a maximum of 11 people. The average resident of Sitka has lived in the community for just over 20 years, with the maximum length of residency being 86 years. In comparison, the average head of household has lived in the community for just over 26 years. The average Sitkan is 38 years old and the median age is 37; the eldest resident living in a surveyed household was 97 years old. There is a balance of male to female residents, with 3,876 male residents and 3,997 female residents (Table 2-3; Figure 2-3). The greatest gender imbalance occurs in the 55–59 age cohort, with 408 females in this group to 206 males. The distribution of ages in the community is relatively equal as well. The above 80 age groups have the fewest people; outside of this older group of residents, the age groups of 65–74 and 40–44 are the next smallest groups.

Interestingly, 52% of Sitka residents were born outside of Alaska, mostly in another U.S. state (Table 2-4). There were 36% of residents born in Sitka; no other location was the birthplace of more than 1% of Sitka residents. Looking just at the birthplaces of household heads, the pattern is similar (Table 2-5). Almost 70% of household heads were born outside of the state; only 18% were born in Sitka, followed by 4% in Juneau and 1% in Kake. No other location accounted for more than 1% of the household heads.

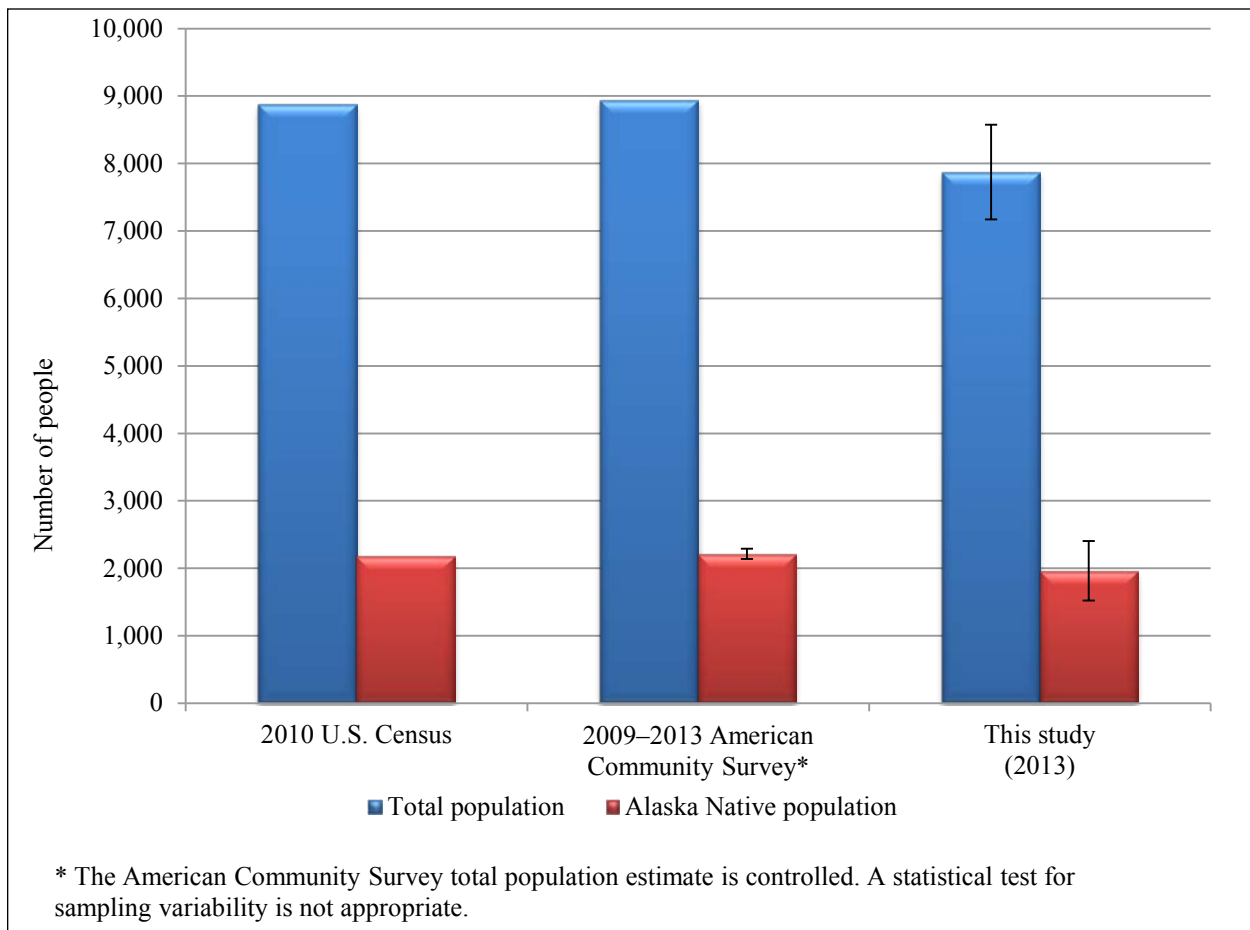


Figure 2-1.—Alaska Native and overall population estimates, Sitka, 2010 and 2013.

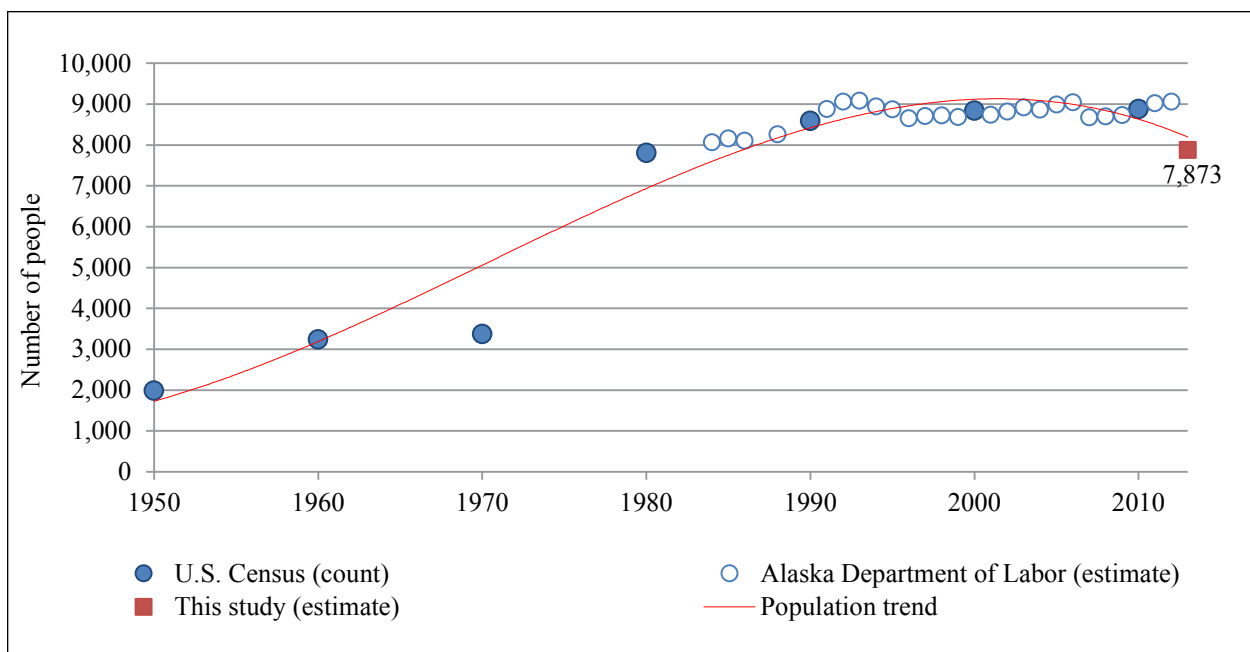


Figure 2-2.—Historical population estimates, Sitka, 1950–2013.

Table 2-2.—Sample and demographic characteristics, Sitka, 2013.

Characteristics	Community Sitka
Sampled households	212
Eligible households	2,965
Percentage sampled	7.2%
Sampled population	592
Estimated community population	7,873.2
Household size	
Mean	2.7
Minimum	1.0
Maximum	11.0
Age	
Mean	38.1
Minimum ^a	0
Maximum	97
Median	37
Length of residency	
Total population	
Mean	20.7
Minimum ^a	0
Maximum	86
Heads of household	
Mean	26.6
Minimum ^a	0
Maximum	86
Alaska Native	
Estimated households ^b	
Number	756.6
Percentage	25.5%
Estimated population	
Number	1,961.2
Percentage	24.9%

Source ADF&G Division of Subsistence household surveys, 2014.

a. A minimum age of 0 (zero) is used for infants who are less than 1 year of age.

b. The estimated number of households in which at least 1 head of household is Alaska Native.

Table 2-3.—Population profile, Sitka, 2013.

Age	Male			Female			Total		
	Number	Percentage	Cumulative percentage	Number	Percentage	Cumulative percentage	Number	Percentage	Cumulative percentage
0–4	307.7	7.9%	7.9%	276.2	6.9%	6.9%	583.9	7.4%	7.4%
5–9	297.9	7.7%	15.6%	221.0	5.5%	12.4%	518.8	6.6%	14.0%
10–14	291.9	7.5%	23.2%	266.4	6.7%	19.1%	558.3	7.1%	21.1%
15–19	169.9	4.4%	27.5%	250.7	6.3%	25.4%	420.5	5.3%	26.4%
20–24	203.4	5.2%	32.8%	284.2	7.1%	32.5%	487.7	6.2%	32.6%
25–29	215.0	5.5%	38.3%	295.8	7.4%	39.9%	510.8	6.5%	39.1%
30–34	232.8	6.0%	44.3%	248.6	6.2%	46.1%	481.4	6.1%	45.2%
35–39	289.8	7.5%	51.8%	303.8	7.6%	53.7%	593.7	7.5%	52.8%
40–44	150.0	3.9%	55.7%	199.3	5.0%	58.7%	349.3	4.4%	57.2%
45–49	344.3	8.9%	64.6%	221.0	5.5%	64.2%	565.3	7.2%	64.4%
50–54	269.5	7.0%	71.5%	234.9	5.9%	70.1%	504.4	6.4%	70.8%
55–59	206.2	5.3%	76.8%	407.3	10.2%	80.3%	613.5	7.8%	78.6%
60–64	283.9	7.3%	84.2%	259.4	6.5%	86.8%	543.3	6.9%	85.5%
65–69	88.8	2.3%	86.5%	84.9	2.1%	88.9%	173.7	2.2%	87.7%
70–74	183.5	4.7%	91.2%	128.3	3.2%	92.1%	311.8	4.0%	91.7%
75–79	209.1	5.4%	96.6%	144.0	3.6%	95.7%	353.1	4.5%	96.1%
80–84	43.4	1.1%	97.7%	71.0	1.8%	97.5%	114.3	1.5%	97.6%
85–89	17.8	0.5%	98.2%	51.3	1.3%	98.8%	69.1	0.9%	98.5%
90–94	21.7	0.6%	98.7%	43.4	1.1%	99.9%	65.0	0.8%	99.3%
95–99	21.7	0.6%	99.3%	0.0	0.0%	99.9%	21.7	0.3%	99.6%
100–104	0.0	0.0%	99.3%	0.0	0.0%	99.9%	0.0	0.0%	99.6%
Missing	27.6	0.7%	100.0%	5.9	0.1%	100.0%	33.6	0.4%	100.0%
Total	3,876.0	100.0%	100.0%	3,997.3	100.0%	100.0%	7,873.2	100.0%	100.0%

Source: ADF&G Division of Subsistence household surveys, 2014.

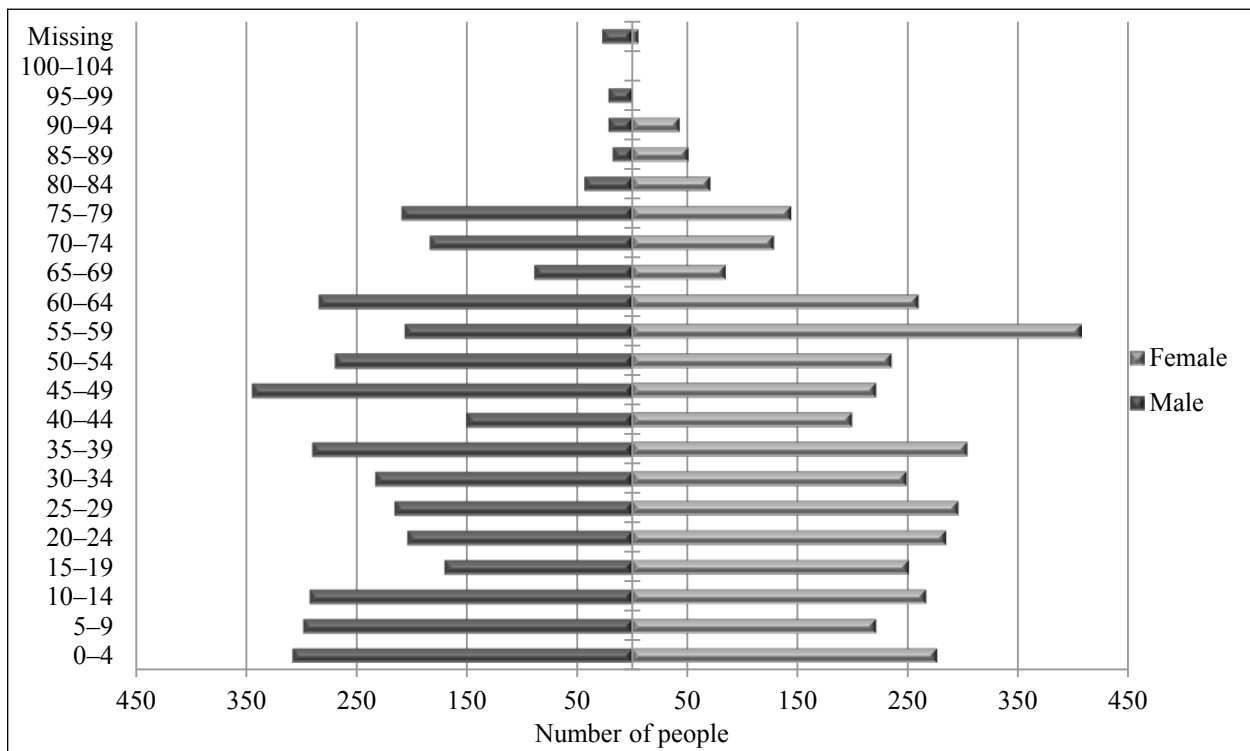


Figure 2-3.—Population profile, Sitka, 2013.

Table 2-4.—Birthplaces of population, Sitka, 2013.

Birthplace	Percentage
Akiak	0.1%
Anchorage	0.9%
Angoon	0.3%
Beaver	0.1%
Bethel	0.1%
Dillingham	0.2%
Fairbanks	0.4%
Gambell	0.1%
Haines	0.2%
Holy Cross	0.1%
Hoonah	0.2%
Hydaburg	0.1%
Juneau	3.9%
Kake	0.7%
Kenai	0.2%
Ketchikan	0.7%
Klawock	0.1%
Kodiak City	0.6%
Kwigillingok	0.1%
Larsen Bay	0.1%
Metlakatla	0.1%
Napaskiak	0.1%
Pelican	0.2%
Scammon Bay	0.1%
Sitka	35.7%
Soldotna	0.8%
Saint George	0.1%
Sutton	0.2%
Tanana	0.0%
Unalakleet	0.1%
Valdez	0.3%
Wasilla	0.3%
Wrangell	0.2%
Yakutat	0.1%
Annette	0.1%
Excursion Inlet	0.1%
Circle/Central	0.1%
Other Alaska	0.1%
Missing	0.7%
Other U.S.	45.9%
Foreign	6.3%

Source ADF&G Division of Subsistence household surveys, 2014.

Note "Birthplace" means the place of residence of the parents of the individual when the individual was born.

Table 2-5.—Birthplaces of household heads, Sitka, 2013.

Birthplace	Percentage
Akiak	0.1%
Anchorage	0.4%
Angoon	0.5%
Beaver	0.1%
Gambell	0.1%
Haines	0.4%
Holy Cross	0.1%
Hoonah	0.2%
Hydaburg	0.1%
Juneau	4.1%
Take	1.1%
Kenai	0.1%
Ketchikan	0.9%
Klawock	0.1%
Kodiak City	0.9%
Kwigillingok	0.1%
Larsen Bay	0.1%
Metlakatla	0.1%
Napaskiak	0.1%
Pelican	0.2%
Scammon Bay	0.1%
Sitka	18.0%
Saint George	0.1%
Unalakleet	0.1%
Valdez	0.4%
Wasilla	0.4%
Wrangell	0.2%
Yakutat	0.1%
Annette	0.1%
Excursion Inlet	0.1%
Circle/Central	0.1%
Missing	0.6%
Other U.S.	62.2%
Foreign	7.1%

Source ADF&G Division of Subsistence household surveys, 2014.

Note "Birthplace" means the place of residence of the parents of the individual when the individual was born.

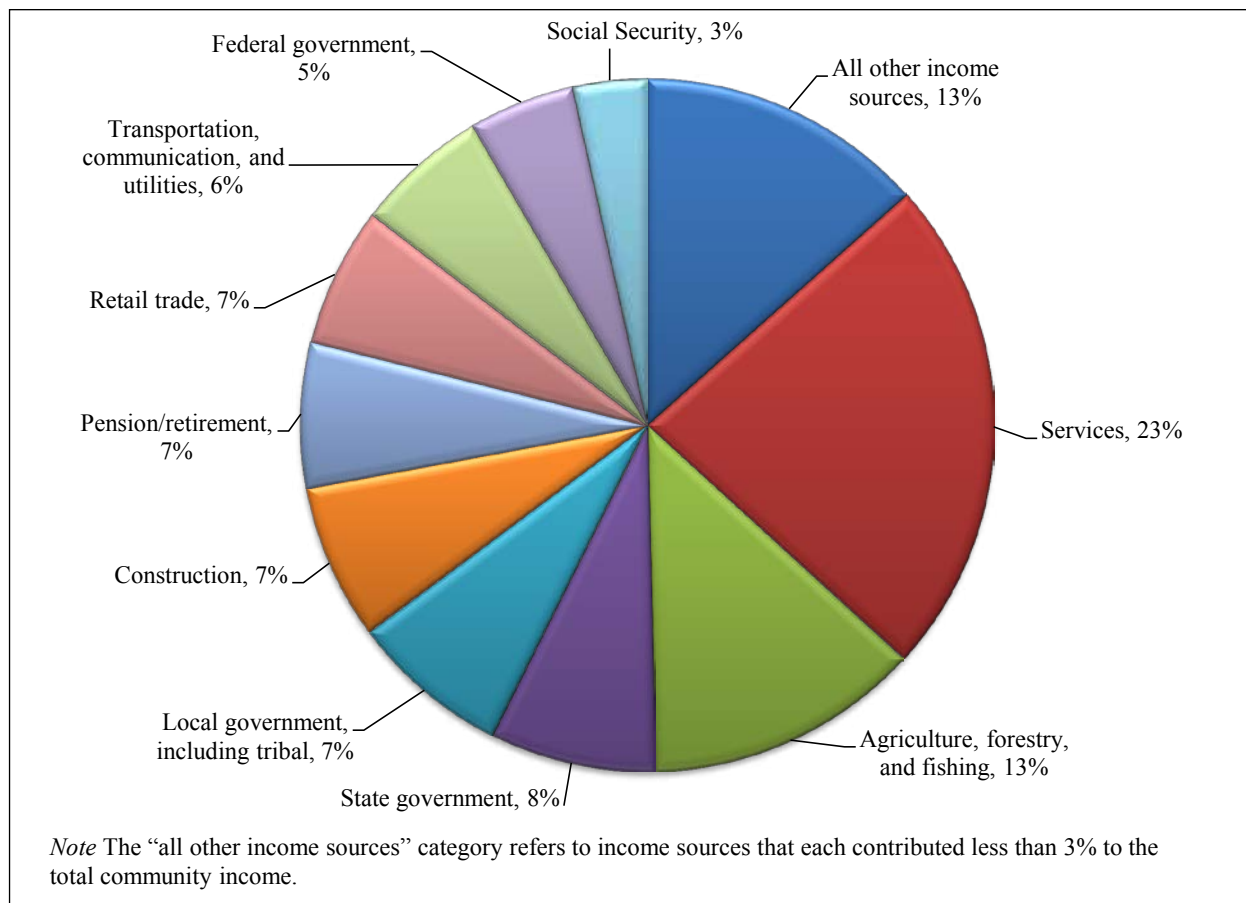


Figure 2-4.—Top income sources, Sitka, 2013.

INCOME AND CASH EMPLOYMENT

Sitka has a diversified economy. The services industry is the single largest source of income, but many other sources contribute substantially to community incomes (Figure 2-4). Looking specifically at earned income versus other income, it is clear that earned income accounts for a much greater percentage of community income (Table 2-6). Services is the largest source of earned income, accounting for almost \$18,000 per household on average. Pension/retirement income is the largest source of other community income, averaging about \$5,100 per household. Average household income in Sitka in 2013 was \$75,157; median household income was \$66,411 (Table 2-6; Figure 2-5). The median income estimated from this study is not significantly different than that estimated through the ACS from 2009–2013 for Sitka City and Borough, or for the ACS estimate for all of Alaska (Figure 2-5).

Table 2-6.—Estimated earned and other income, Sitka, 2013.

Income source	Number of employed adults	Number of households	Total for community	-/+ 95% CI	Mean per household	Percentage of total community income
Earned income						
Services	1,598.7	1,275.0	\$51,970,791	\$35,932,196 – \$72,424,436	\$17,528	23.3%
Agriculture, forestry, and fishing	855.7	773.9	\$28,713,906	\$16,892,731 – \$46,902,363	\$9,684	12.9%
State government	418.8	388.3	\$17,241,001	\$8,987,314 – \$32,654,169	\$5,815	7.7%
Local government, including tribal	555.7	460.4	\$16,600,176	\$8,753,635 – \$27,067,167	\$5,599	7.4%
Construction	422.4	414.8	\$16,175,292	\$9,764,503 – \$26,016,691	\$5,455	7.3%
Retail trade	691.7	552.4	\$14,493,172	\$7,602,137 – \$27,814,743	\$4,888	6.5%
Transportation, communication, and utilities	272.9	272.8	\$13,854,731	\$5,336,039 – \$27,532,948	\$4,673	6.2%
Federal government	221.6	199.0	\$11,013,371	\$3,308,367 – \$20,578,706	\$3,714	4.9%
Finance, insurance, and real estate	73.9	73.8	\$2,295,444	\$926,734 – \$6,952,277	\$774	1.0%
Manufacturing	109.0	108.8	\$1,848,552	\$224,564 – \$4,754,950	\$623	0.8%
Other employment	28.8	28.7	\$1,039,236	\$187,676 – \$3,024,855	\$351	0.5%
Earned income subtotal	4,458.4	2,466.0	\$175,245,672	\$140,274,232 – \$214,059,837	\$59,105	78.6%
Other income						
Pension/retirement		727.9	\$15,123,386	\$9,139,004 – \$23,140,111	\$5,101	6.8%
Social Security		678.8	\$7,703,870	\$4,722,390 – \$11,962,960	\$2,598	3.5%
Alaska Permanent Fund dividend		2,744.0	\$6,164,816	\$5,536,415 – \$6,896,387	\$2,079	2.8%
Other		209.1	\$6,060,086	\$1,346,636 – \$15,871,379	\$2,044	2.7%
Investments/stocks/bonds		21.7	\$4,335,780	\$0 – \$8,671,560	\$1,462	1.9%
Fishing permit revenues		21.7	\$2,167,890	\$0 – \$4,335,780	\$731	1.0%
Rental income		108.4	\$1,102,733	\$210,044 – \$2,411,585	\$372	0.5%
Native corp. dividend		732.9	\$1,061,663	\$771,791 – \$1,561,901	\$358	0.5%
Food stamps		246.8	\$900,969	\$502,047 – \$1,453,426	\$304	0.4%
Disability		151.0	\$866,231	\$245,194 – \$1,808,449	\$292	0.4%
Unemployment		193.6	\$803,141	\$380,645 – \$1,472,173	\$271	0.4%
TANF (Temporary cash assistance for needy families)		100.7	\$315,852	\$124,344 – \$639,396	\$107	0.1%
Adult public assistance (OAA, APD)		67.1	\$252,685	\$77,315 – \$540,936	\$85	0.1%
Child support		61.2	\$224,896	\$11,287 – \$869,416	\$76	0.1%
Workers' compensation/insurance		27.6	\$155,769	\$0 – \$596,624	\$53	0.1%
Inheritance		5.9	\$118,812	\$0 – \$237,624	\$40	0.1%
Veterans assistance		33.6	\$92,395	\$3,094 – \$325,495	\$31	0.0%
Heating assistance		84.9	\$58,355	\$20,230 – \$130,981	\$20	0.0%
Meeting honoraria		5.9	\$41,584	\$0 – \$83,168	\$14	0.0%
Longevity bonus		39.5	\$20,040	\$172 – \$78,701	\$7	0.0%
Dividend/interest		43.4	\$10,940	\$0 – \$24,615	\$4	0.0%
Supplemental Security income		5.9	\$5,489	\$0 – \$10,978	\$2	0.0%
CITGO fuel voucher		12.5	\$5,455	\$0 – \$21,818	\$2	0.0%
Women, infants, and children (WIC)		5.9	\$2,317	\$0 – \$4,634	\$1	0.0%
Foster care		11.9	\$533	\$0 – \$1,211	\$0	0.0%
Other income subtotal		2,844.7	\$47,595,684	\$35,183,297 – \$62,501,564	\$16,053	21.4%
Community income total			\$222,841,356	\$186,207,889 – \$261,617,514	\$75,157	100.0%

Source: ADF&G Division of Subsistence household surveys, 2014.

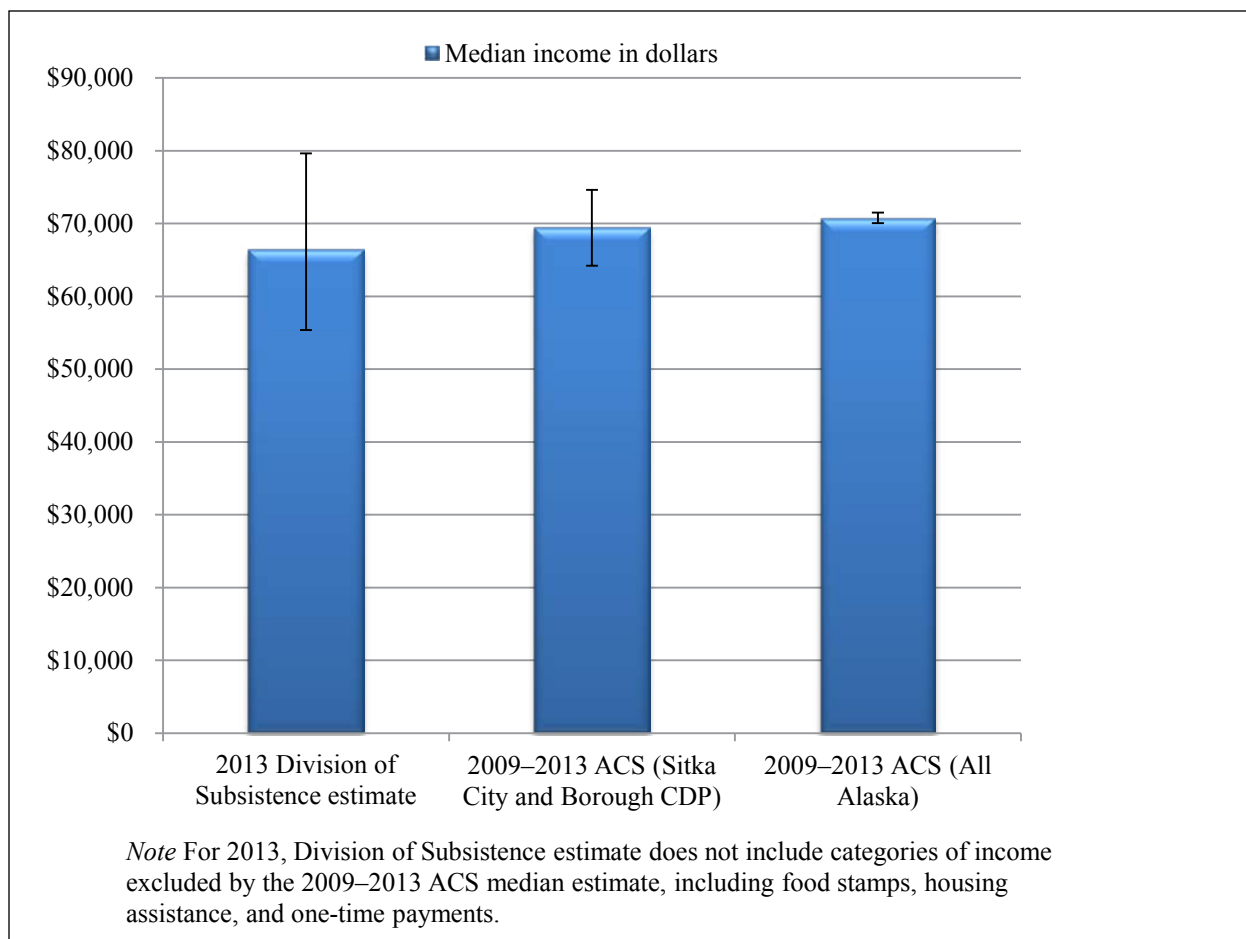


Figure 2-5.—Comparison of median household income estimates, Sitka, 2013.

Shifting the focus from income to employment characteristics, the services industry provides more jobs and employs more households and individuals than any other industry in Sitka (Table 2-7). Other industries that provided a high percentage of jobs is the agriculture, forestry, and fishing industry and retail trade. Finance, insurance, and real estate provided the fewest number of jobs and employed the fewest numbers of households and individuals. The majority of reported jobs in Sitka were full time (67%) or part time (21%) (Table 2-8). Of employed persons and employed households, the majority of these also held full-time jobs, followed by part-time jobs. Of all adults, the average weeks of employment was 33 while employed adults were employed for an average of 46 weeks over the year; 73% of working-age adults (16 or older) in the community were employed (Table 2-9). Nearly 71% of employed adults were employed year-round. On average, an employed adult held 1.3 jobs over the course of the year, with a maximum of 4 jobs held. For households, 83% contained at least 1 employed adult; on average a household had 1.5 employed adults. For employed households, there was an average of 2.3 jobs held per household, with a maximum of 8 jobs held.

Table 2-7.—Employment by industry, Sitka, 2013.

Industry	Jobs	Households	Individuals	Percentage of wage earnings
Estimated total number	5,692.4	2,466.0	4,458.4	
Federal government	3.9%	8.1%	5.0%	6.3%
Executive, administrative, and managerial	0.1%	0.3%	0.1%	0.1%
Natural scientists and mathematicians	1.3%	3.0%	1.7%	2.3%
Technologists and technicians, except health	0.5%	1.2%	0.6%	0.1%
Administrative support occupations, including clerical	0.4%	0.9%	0.5%	0.7%
Service occupations	0.4%	0.9%	0.5%	0.7%
Transportation and material moving occupations	0.4%	0.9%	0.5%	0.7%
Military occupations	0.8%	1.8%	1.0%	1.7%
State government	7.8%	15.7%	9.4%	9.8%
Executive, administrative, and managerial	0.6%	1.4%	0.8%	0.9%
Social scientists, social workers, religious workers, and lawyers	0.4%	0.9%	0.5%	1.8%
Teachers, librarians, and counselors	2.8%	5.6%	3.1%	3.8%
Registered nurses, pharmacists, dietitians, therapists, and physician assistants	0.2%	0.5%	0.3%	0.1%
Writers, artists, entertainers, and athletes	0.1%	0.3%	0.1%	0.0%
Health technologists and technicians	0.2%	0.5%	0.3%	0.3%
Technologists and technicians, except health	0.9%	2.1%	1.2%	0.9%
Marketing and sales occupations	0.4%	0.9%	0.5%	0.6%
Administrative support occupations, including clerical	0.5%	1.2%	0.6%	0.3%
Service occupations	0.9%	2.2%	1.2%	0.8%
Agricultural, forestry, and fishing occupations	0.4%	0.9%	0.5%	0.2%
Construction and extractive occupations	0.1%	0.3%	0.1%	0.0%
Occupation not indicated	0.1%	0.3%	0.1%	0.1%
Local government, including tribal	10.6%	18.7%	12.5%	9.5%
Executive, administrative, and managerial	0.6%	1.4%	0.8%	0.8%
Natural scientists and mathematicians	0.8%	1.8%	1.0%	1.4%
Teachers, librarians, and counselors	4.3%	8.1%	5.0%	3.6%
Health diagnosing and treating practitioners	0.4%	0.9%	0.5%	0.5%
Writers, artists, entertainers, and athletes	0.6%	1.0%	0.7%	0.0%
Health technologists and technicians	0.1%	0.3%	0.1%	0.1%
Technologists and technicians, except health	0.5%	1.2%	0.6%	0.9%
Administrative support occupations, including clerical	1.5%	3.3%	1.9%	1.0%
Service occupations	0.8%	1.8%	1.0%	0.4%
Mechanics and repairers	0.4%	0.9%	0.5%	0.3%
Construction and extractive occupations	0.1%	0.3%	0.1%	0.1%
Transportation and material moving occupations	0.3%	0.8%	0.4%	0.1%
Handlers, equipment cleaners, helpers, and laborers	0.2%	0.5%	0.3%	0.2%
Agriculture, forestry, and fishing	16.3%	31.4%	19.2%	16.4%
Executive, administrative, and managerial	0.9%	2.1%	1.2%	1.7%
Service occupations	0.4%	0.9%	0.5%	0.5%
Agricultural, forestry, and fishing occupations	14.2%	27.5%	16.5%	12.9%
Mechanics and repairers	0.8%	1.8%	1.0%	1.2%
Construction	8.6%	16.8%	9.5%	9.2%
Executive, administrative, and managerial	0.4%	0.9%	0.5%	0.8%
Engineers, surveyors, and architects	0.1%	0.3%	0.1%	0.1%
Administrative support occupations, including clerical	0.1%	0.3%	0.1%	0.2%
Service occupations	0.1%	0.3%	0.1%	0.1%
Construction and extractive occupations	7.2%	13.7%	7.6%	7.2%

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Table 2-7.-Page 2 of 2.

Industry	Jobs	Households	Individuals	Percentage of wage earnings
Production working occupations	0.1%	0.3%	0.1%	0.2%
Transportation and material moving occupations	0.6%	1.4%	0.8%	0.7%
Manufacturing	1.9%	4.4%	2.4%	1.1%
Writers, artists, entertainers, and athletes	1.5%	3.5%	1.9%	0.7%
Precision production occupations	0.4%	0.9%	0.5%	0.3%
Transportation, communication, and utilities	4.8%	11.1%	6.1%	7.9%
Executive, administrative, and managerial	1.6%	3.7%	2.0%	5.2%
Writers, artists, entertainers, and athletes	0.4%	0.9%	0.5%	0.8%
Marketing and sales occupations	0.4%	0.9%	0.5%	0.4%
Administrative support occupations, including clerical	0.8%	1.8%	1.0%	0.4%
Service occupations	0.4%	0.9%	0.5%	0.3%
Transportation and material moving occupations	1.2%	2.8%	1.6%	0.7%
Retail trade	13.2%	22.4%	15.5%	8.3%
Executive, administrative, and managerial	1.8%	3.2%	2.3%	2.5%
Writers, artists, entertainers, and athletes	0.5%	1.2%	0.6%	0.0%
Health technologists and technicians	0.8%	1.8%	1.0%	0.5%
Marketing and sales occupations	5.0%	10.9%	6.3%	1.9%
Administrative support occupations, including clerical	1.2%	1.8%	1.5%	1.2%
Service occupations	2.5%	5.5%	3.1%	0.8%
Mechanics and repairers	0.1%	0.3%	0.1%	0.1%
Production working occupations	0.1%	0.3%	0.1%	0.1%
Transportation and material moving occupations	0.4%	0.9%	0.5%	0.3%
Handlers, equipment cleaners, helpers, and laborers	0.8%	1.8%	1.0%	1.0%
Finance, insurance and real estate	1.3%	3.0%	1.7%	1.3%
Marketing and sales occupations	0.5%	1.2%	0.6%	0.5%
Administrative support occupations, including clerical	0.8%	1.8%	1.0%	0.8%
Services	30.8%	51.7%	35.9%	29.7%
Executive, administrative, and managerial	3.1%	7.2%	4.0%	4.0%
Engineers, surveyors, and architects	0.4%	0.9%	0.5%	2.0%
Social scientists, social workers, religious workers, and lawyers	2.1%	3.9%	2.7%	2.6%
Teachers, librarians, and counselors	2.5%	3.9%	2.7%	0.8%
Health diagnosing and treating practitioners	0.8%	1.8%	1.0%	4.0%
Registered nurses, pharmacists, dietitians, therapists, and physician assistants	2.9%	6.6%	3.7%	4.5%
Writers, artists, entertainers, and athletes	0.4%	0.9%	0.5%	0.1%
Health technologists and technicians	2.1%	4.9%	2.7%	1.5%
Marketing and sales occupations	0.4%	0.9%	0.5%	0.3%
Administrative support occupations, including clerical	4.7%	10.9%	6.0%	4.3%
Service occupations	8.3%	13.5%	8.9%	3.4%
Agricultural, forestry, and fishing occupations	0.4%	0.9%	0.5%	0.0%
Mechanics and repairers	1.0%	2.3%	1.3%	0.9%
Transportation and material moving occupations	0.9%	2.1%	1.2%	0.9%
Handlers, equipment cleaners, helpers, and laborers	0.6%	1.4%	0.8%	0.2%
Occupation not indicated	0.1%	0.3%	0.1%	0.0%
Industry not indicated	0.9%	1.2%	0.6%	0.6%
Marketing and sales occupations	0.8%	0.9%	0.5%	0.5%
Miscellaneous occupations	0.1%	0.3%	0.1%	0.1%

Source ADF&G Division of Subsistence household surveys, 2014.

Table 2-8.—Reported job schedules, Sitka, 2013.

Schedule	Jobs		Employed persons		Employed households	
	Number	Percentage	Number	Percentage	Number	Percentage
Full time	3,826.2	67.2%	3,380.4	75.8%	2,121.0	85.9%
Part time	1,216.8	21.4%	1,008.8	22.6%	856.2	34.7%
Shift	86.5	1.5%	86.5	1.9%	86.2	3.5%
On-call (occasional)	453.9	8.0%	425.1	9.5%	365.8	14.8%
Part-time shift	22.5	0.4%	22.5	0.5%	22.6	0.9%
Schedule not reported	86.5	1.5%	86.5	1.9%	80.0	3.2%

Source ADF&G Division of Subsistence household surveys, 2013.

Note Respondents who had more than 1 job in the study year could provide multiple responses, so the percentages may sum to more than 100%.

Table 2-9.—Employment characteristics, Sitka, 2013.

Characteristic	Community
	Sitka
All adults	
Number	6,125.8
Mean weeks employed	33.0
Employed adults	
Number	4,458.4
Percentage	72.8%
Jobs	
Number	5,692.4
Mean	1.3
Minimum	1
Maximum	4
Months employed	
Mean	10.5
Minimum	1
Maximum	12
Percentage employed year-round	70.5%
Mean weeks employed	45.4
Households	
Number	2,965.0
Employed	
Number	2,468.0
Percentage	83.2%
Jobs per employed household	
Mean	2.3
Minimum	1
Maximum	8
Employed adults	
Mean	
Employed households	1.8
Total households	1.5
Minimum	1
Maximum	6
Mean person-weeks of employment	68.2

Source ADF&G Division of Subsistence household surveys, 2014.

FOOD SECURITY

Survey respondents were asked a set of questions intended to assess their household's food security, defined as, "access by all people at all times to enough food for an active, healthy life" (Coleman-Jensen et al. 2012). The food security questions were modeled after those developed by the U.S. Department of Agriculture (USDA) but modified by ADF&G to account for differences in access to subsistence and store-bought foods. Based on the aggregated number of affirmative responses to these questions, households were broadly categorized as being food secure or food insecure following a USDA protocol (Bickel et al. 2000). Food secure households were broken down further into 2 subcategories: high or marginal food security. Food insecure households were divided into 2 subcategories: low or very low food security.

Households with a high or marginal level of food security reported 1 or 2 instances of food access problems or limitations—typically anxiety over food sufficiency or a shortage of particular foods in the house—but gave little or no indication of changes in diets or food intake. Households with low food security reported reduced quality, variety, or desirability of their diet, but they, too, gave little indication of reduced food intake. Households classified as having very low food security were those that reported multiple instances of disrupted eating patterns and reduced food intake (Coleman-Jensen et al. 2012).

Core questions and responses from Sitka residents are summarized in Figure 2-6. Food security results for surveys for Sitka, the state of Alaska, and the United States are summarized in Figure 2-7. For most of the questions asked about food security issues, few households responded affirmatively (Figure 2-6). One-quarter of the estimated households indicated that at some point in the year, their subsistence food did not last and they could not get more. Overall, less than 10% of estimated households indicated that their food did not last at some point during the year, but overwhelmingly indicated that this was a problem for subsistence food and not store-bought food. In part, this is because Sitka is a relatively large community with multiple stores and experiences less disruption to the supply of commercial goods than some communities in more remote areas of the state. As long as households have the economic resources to buy food, it is unusual for there not to be commercial food available in the community over an extended time period. Availability of subsistence foods, on the other hand, is seasonal in nature. If a household was unable to harvest enough of a resource to last until that resource was again available, there may be few options for replenishing the supply. The other question that garnered the most affirmative answers (16% of households) was that the household lacked the resources needed to get food. In this question, resources were defined as what the household needed to hunt, fish, gather, or buy food. One resource that many residents highlighted as important for harvesting food was access to a boat. Households that do not own a boat, do not have the economic resources to purchase fuel for a boat, or do not otherwise have access to a boat, may find it more difficult to successfully harvest sufficient resources for the year. Eight percent of estimated households said their household worried about having enough food at some point in the year. No more than 4% of estimated households agreed with any of the other questions.

Sitka households were as food secure as households overall in the state of Alaska, and more secure than households in the nation (Figure 2-7). Looking at the food insecure households, however, Sitka has a lower percentage of households with very low food security (2%) compared to the state (5%) or the nation (6%). Correspondingly, Sitka had a slightly higher percentage of households with low food security (10%) compared to the state (7%) and nation (9%).

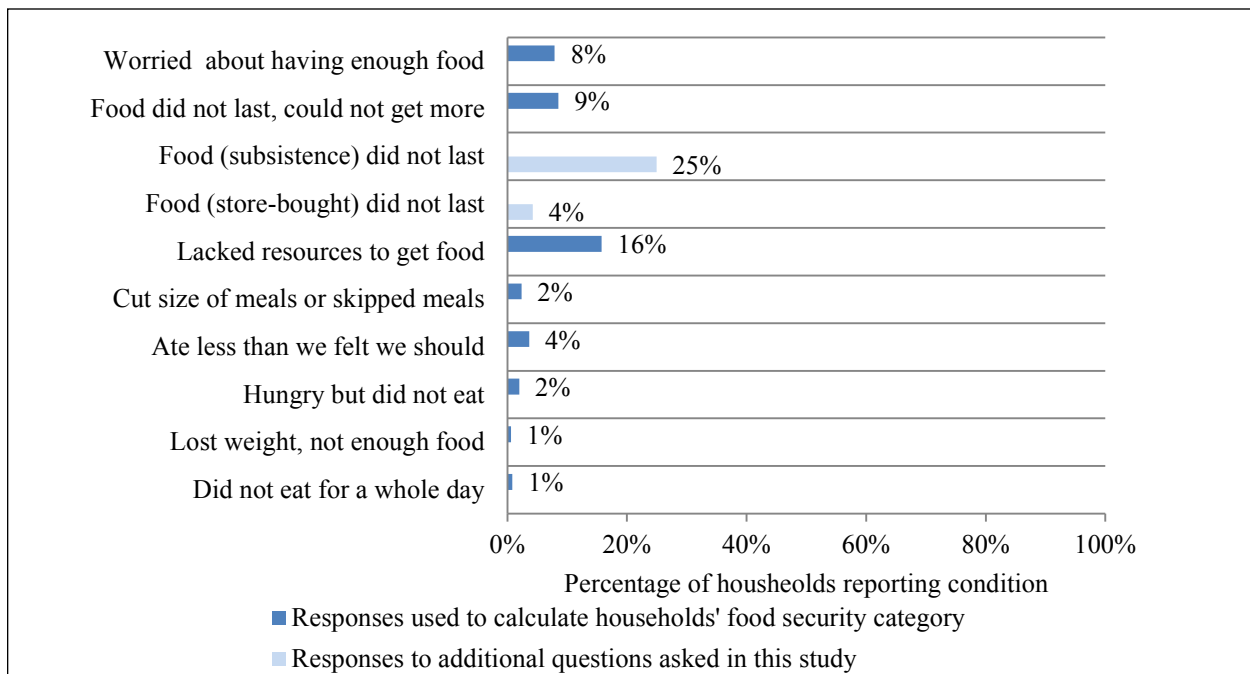


Figure 2-6.—Responses to questions about food insecure conditions, Sitka, 2013.

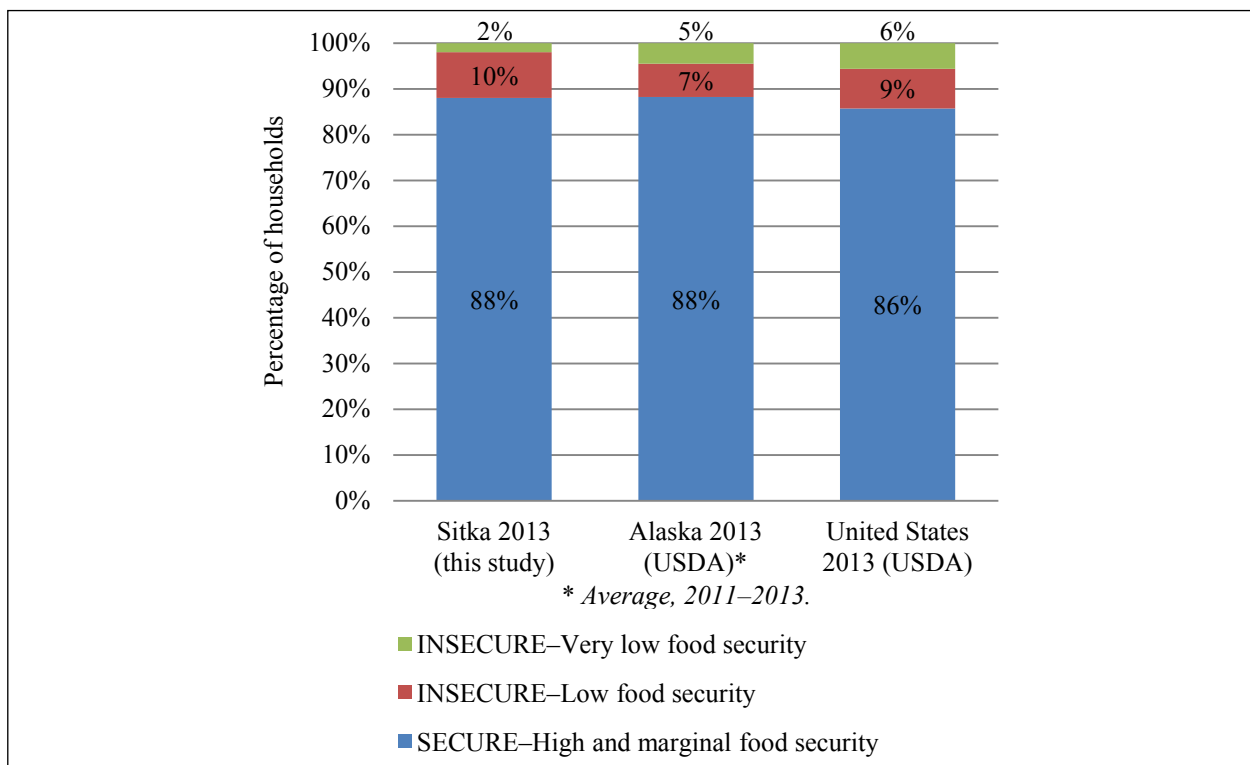


Figure 2-7.—Comparison of food security categories, Sitka, Alaska, and United States, 2013.

Figure 2-8 portrays the mean number of food insecure conditions per household by food security category by month. Figure 2-9 shows which months households reported foods not lasting. In general, a trend can be seen of higher food security during the summer months than in the winter months. For food secure households, there is very little change in security throughout the year, but a small dip (fewer insecure conditions) can be seen in July (Figure 2-8). Food secure households are those that have access to enough subsistence resources or have an economic situation that allows them to purchase needed food, so it is not surprising that there was not much food security variation over the course of a year for these households. For households with low food security, a more seasonal trend is apparent, with food insecure conditions steadily decreasing beginning in February until September, when they started increasing again. Households with very low food security exhibit a similar pattern to low food secure households, but the seasonal trends are more pronounced with a bigger difference in the mean number of insecure conditions per household in January versus in August. Food insecure conditions were greatest in the winter months of November through January, then decreased slightly through May. A big decrease occurred during the months of June through August, before rapidly rising again until November. The seasonal trend displayed by the food insecure households generally follows the availability of subsistence resources. Winter is a lean time of year with few resources available. Beginning with the return of Pacific herring in late winter/early spring, more resources steadily become available and accessible to households, either through harvest or through sharing networks. The bounty lasts through the summer, but resources start becoming scarcer through the fall back into the winter.

The important contribution of subsistence foods to the food security of Sitka households is highlighted in Figure 2-9. Over the course of the year, there is little change in the estimated percentage of households experiencing store-bought foods not lasting; it remains around 2% of households in Sitka. The estimated percentage of households with subsistence foods not lasting did fluctuate over the year. The highest estimated percentage of households with subsistence foods not lasting occurred in January. Fewer estimated households reported foods not lasting each month as the year progressed until August. From September through the end of the year, increasing numbers of households reported subsistence foods not lasting.

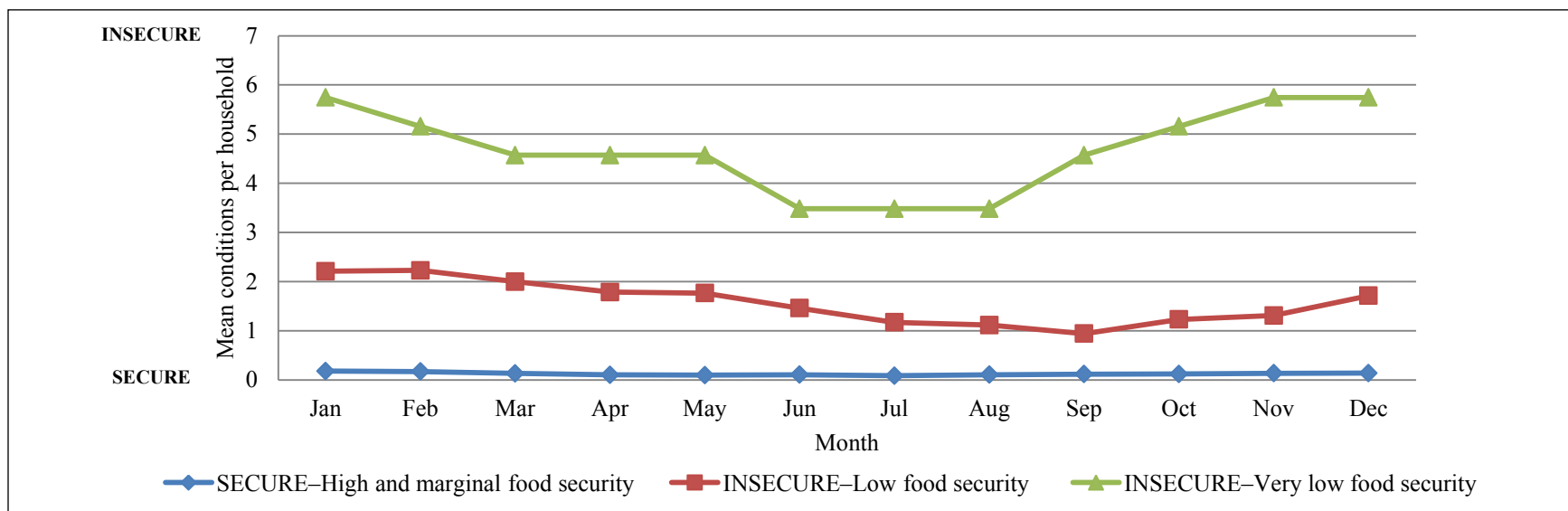


Figure 2-8.—Mean number of food insecure conditions by month and by household food security category, Sitka, 2013.

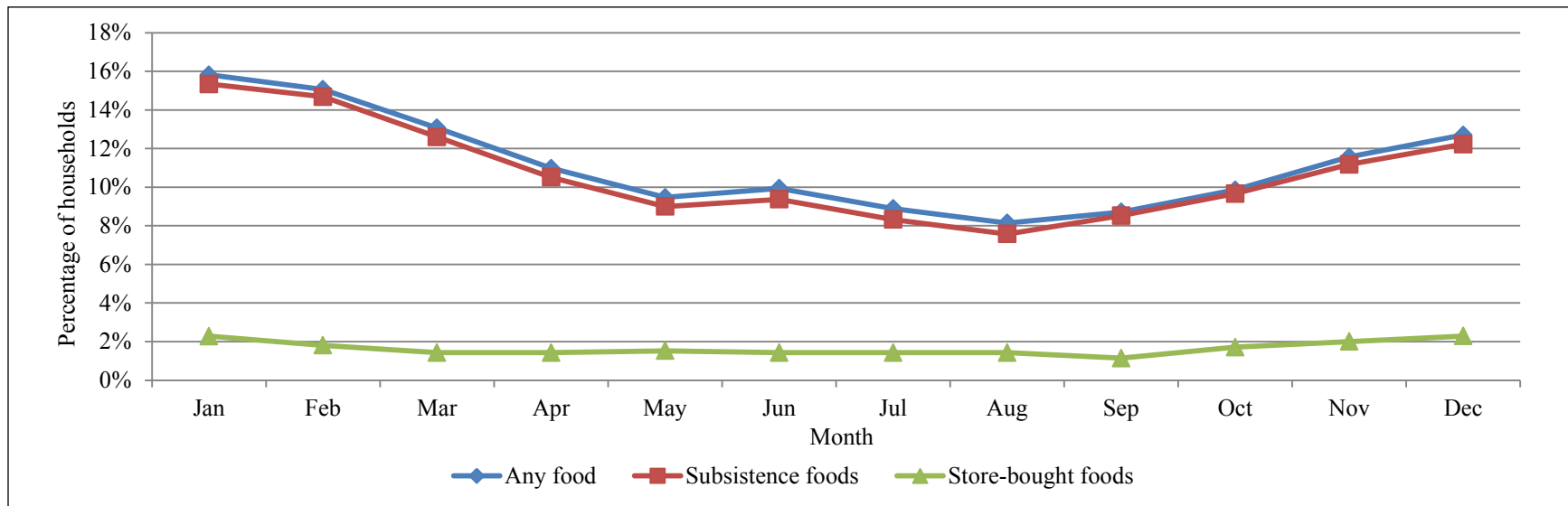


Figure 2-9.—Comparison of months when food did not last, Sitka, 2013.

Table 2-10.—Individual participation in subsistence harvesting and processing activities, Sitka, 2013.

Total number of people	7,873.2
Fish	
Fish	
Number	3,715.0
Percentage	47.2%
Process	
Number	4,125.5
Percentage	52.4%
Large land mammals	
Hunt	
Number	1,681.5
Percentage	21.4%
Process	
Number	2,097.6
Percentage	26.6%
Small land mammals	
Hunt or trap	
Number	197.2
Percentage	2.5%
Process	
Number	132.2
Percentage	1.7%
Marine mammals	
Hunt	
Number	176.8
Percentage	2.2%
Process	
Number	349.5
Percentage	4.4%
Birds and eggs	
Hunt/gather	
Number	371.6
Percentage	4.7%
Process	
Number	371.6
Percentage	4.7%
Vegetation	
Gather	
Number	5,290.2
Percentage	67.2%
Process	
Number	4,843.7
Percentage	61.5%
Any resource	
Attempt harvest	
Number	6,141.5
Percentage	78.0%
Process	
Number	5,987.9
Percentage	76.1%

Source ADF&G Division of Subsistence household surveys, 2014.

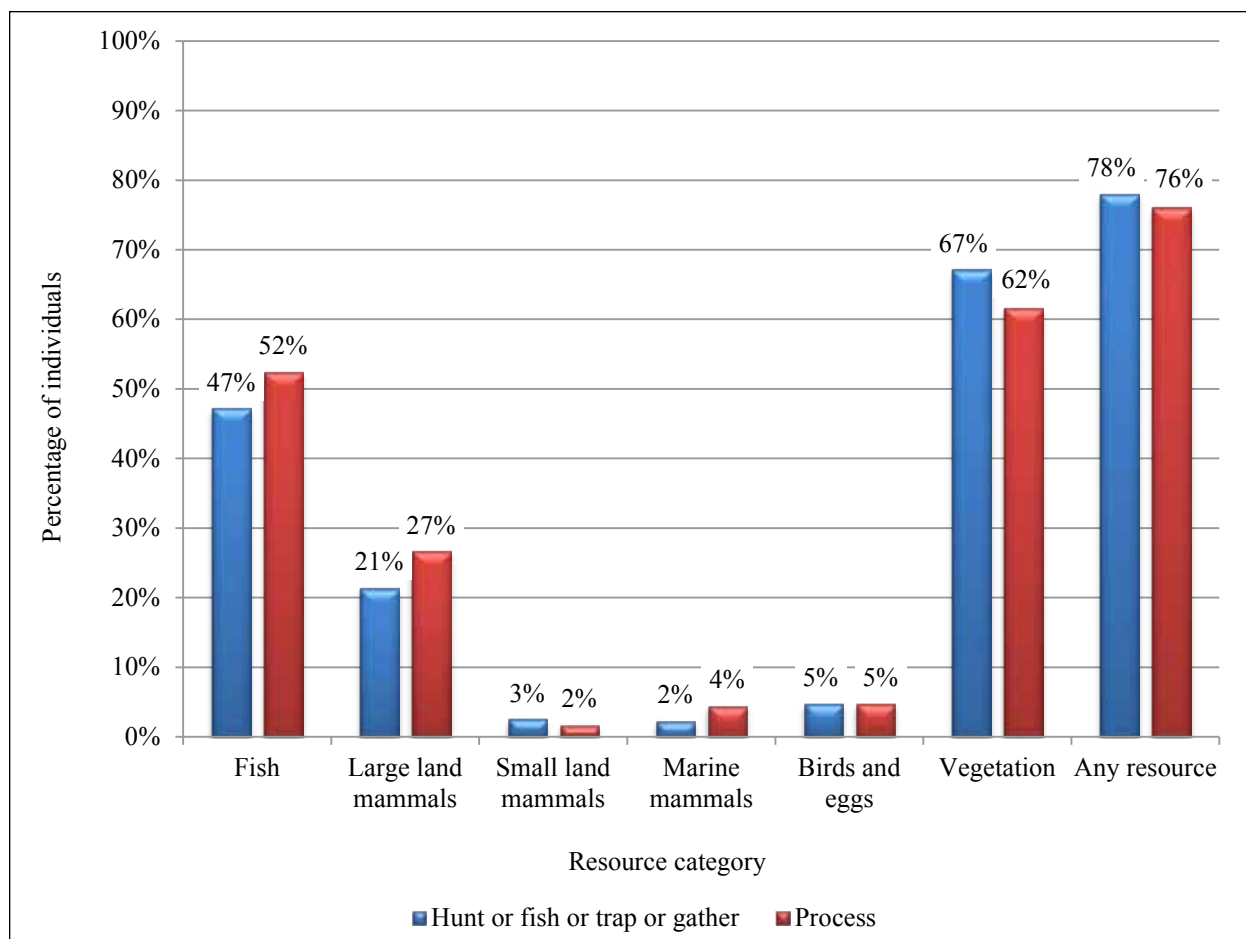


Figure 2-10.—Individual participation in subsistence harvesting and processing activities, Sitka, 2013.

SUMMARY OF HARVEST AND USE PATTERNS

Individual Participation in the Harvesting and Processing of Wild Resources

Table 2-10 and Figure 2-10 report the expanded levels of individual participation in the harvest and processing of wild resources by all Sitka residents in 2013. The resource category with the highest participation in harvest activities was vegetation (berries, plants, seaweed) with an estimated 67% of individuals participating. Following vegetation, in terms of participation in harvesting, were fish (47% of individuals) and large land mammals (21% of individuals). The resource categories with the least individual participation were birds and eggs (5%), small land mammals (3%), and marine mammals (2%). For most of these resource categories, more individuals participated in the processing of the resource than in the harvesting effort. Vegetation (62% of individuals processing) is an exception to this. Berry picking is often a family affair, but the making of jams and jellies or other products often falls to just a few household members. More individuals participated in processing fish (52%) and large land mammals (27%) than in harvesting. Again, this finding makes sense since these harvesting activities may require household members to be older, as an example, while processing may require a lot of effort, especially for large land mammals like moose or deer. Less difference is seen for birds and eggs (5% processing) or small land mammals (2%). Twice as many individuals participated in the processing of marine mammals (4%) as the harvesting effort. This likely reflects the highly specialized and skilled nature of marine mammal hunting.

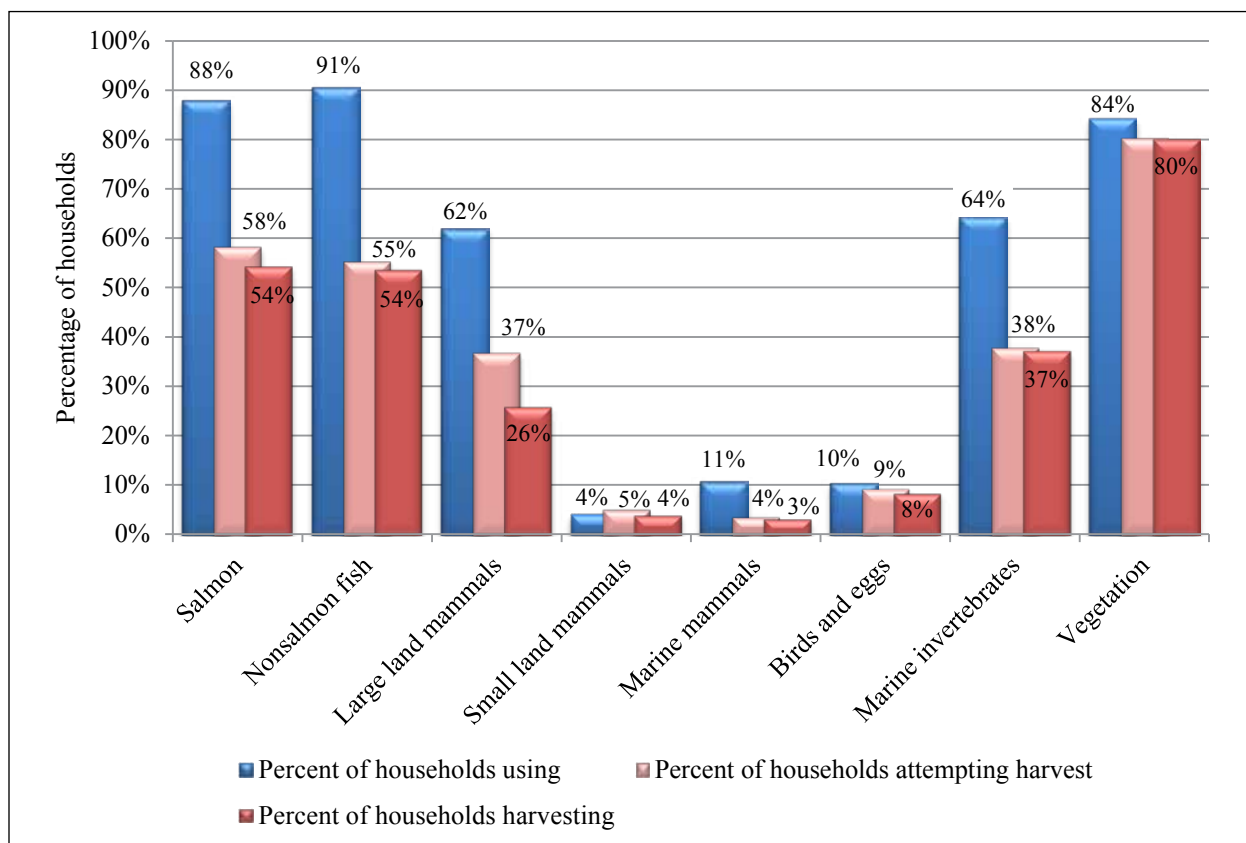


Figure 2-11.—Percentages of households using, attempting to harvest, and harvesting wild resources, by resource category, Sitka, 2013.

Harvest and Use of Wild Resources at the Household Level

Figure 2-11 shows by resource category the percentages of households that used wild resources, attempted to harvest, and harvested wild foods. As can be seen, for most resource categories, more households used a resource category than harvested it, which can be indicative of use of shared resources. Sharing and distributing resources is a key component of subsistence economies. Small land mammals and birds and eggs show relatively equal percentages of households using and harvesting resources from these categories. This is likely an indication that these resources play a smaller role in the community overall; small land mammals are often trapped for income and therefore less likely to be given away and federal regulations curtail the subsistence harvest of birds and bird eggs. For most resource categories, the percentage of households attempting to harvest the resources is the same or nearly the same as the percentage of households that harvested, indicating that there were high success rates. The resource category of large land mammals shows the largest discrepancy between attempted harvest and successful harvest. This is a pattern seen in other communities and is likely a reflection of the difficulty in successfully hunting a deer or moose.

Table 2-11 summarizes resource harvest and use characteristics for Sitka in 2013 at the household level. The average harvest was 465 lb usable weight per household and 175 lb per person. During the study year, community households harvested an average of 8 kinds of resources and used an average of 12 kinds of resources. The maximum number of resources used by any household was 33. In addition, households gave away an average of 4 kinds of resources.

Table 2-11.—Resource harvest and use characteristics, Sitka, 2013.

Characteristic	
Mean number of resources used per household	11.8
Minimum	0
Maximum	33
95% confidence limit (\pm)	9.9%
Median	10
Mean number of resources attempted to harvest per household	8.2
Minimum	0
Maximum	32
95% confidence limit (\pm)	13.4%
Median	6
Mean number of resources harvested per household	7.7
Minimum	0
Maximum	31
95% confidence limit (\pm)	13.6%
Median	6.0
Mean number of resources received per household	5.5
Minimum	0
Maximum	31
95% confidence limit (\pm)	13.3%
Median	5
Mean number of resources given away per household	4.1
Minimum	0
Maximum	20
95% confidence limit (\pm)	16.4%
Median	3
Household harvest (pounds)	
Minimum	0
Maximum	16,258
Mean	464.6
Median	123
Total harvest weight (lb)	1,377,570.6
Community per capita harvest (lb)	175.0
Percentage using any resource	98.5%
Percentage attempting to harvest any resource	91.0%
Percentage harvesting any resource	90.6%
Percentage receiving any resource	92.3%
Percentage giving away any resource	76.4%
Number of households in sample	212
Number of resources asked about and identified voluntarily by respondents	188

Source ADF&G Division of Subsistence household surveys, 2014.

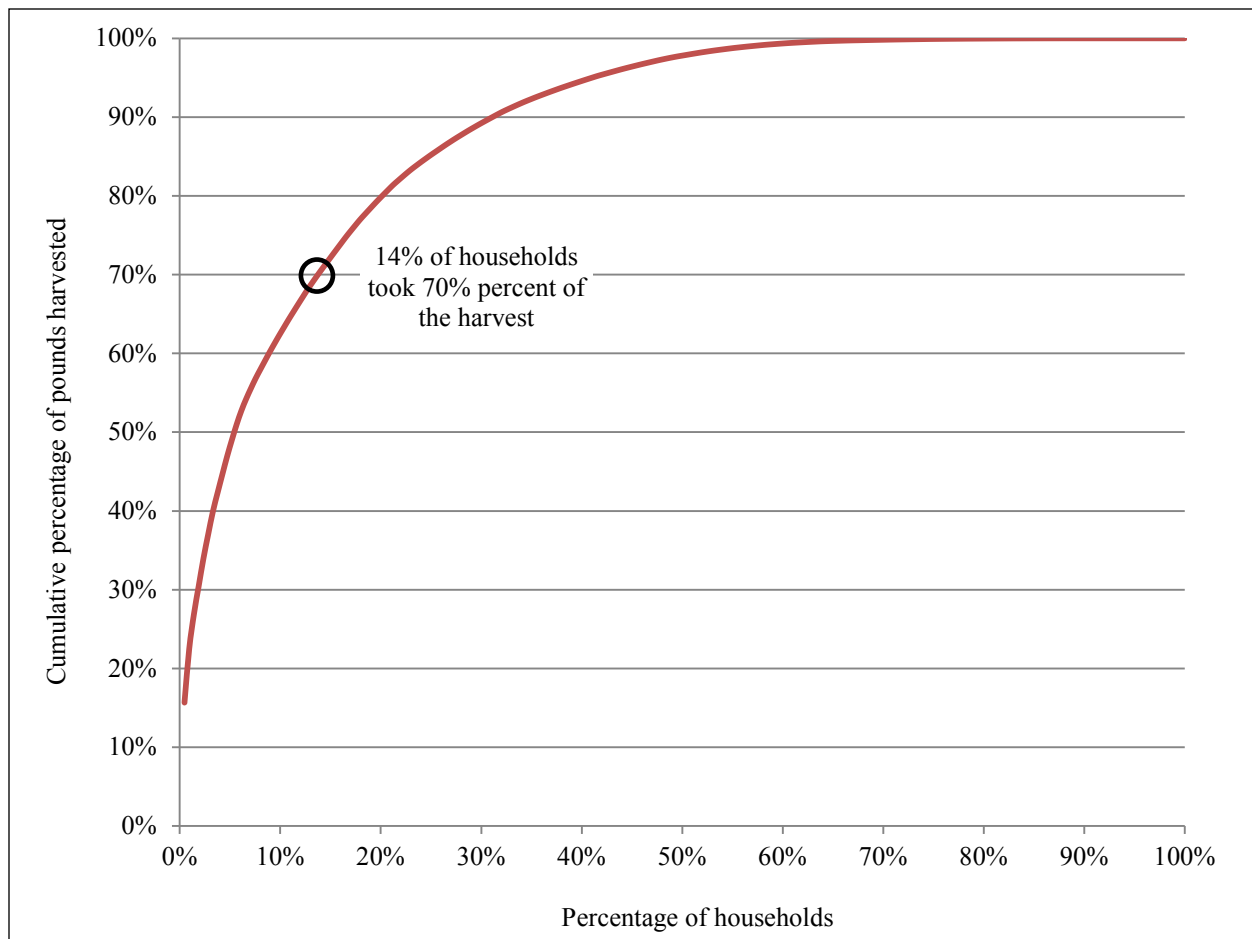


Figure 2-12.—Household specialization, Sitka, 2013.

Sharing of Wild Resources

Household Specialization in Resource Harvesting

Previous studies (Wolfe 1987; Wolfe et al. 2010) have shown that in most rural Alaska communities, a relatively small portion of households produces most of the community’s fish and wildlife harvests, which they share with other households. A study of 3,265 households in 66 rural Alaska communities found that about 33% of the households accounted for 76% of subsistence harvests (Wolfe et al. 2010). Although overall the set of very productive households was diverse, factors that were associated with higher levels of subsistence harvests included larger households with a pool of adult male labor, higher wage income, involvement in commercial fishing, and community location.

As shown in Figure 2-12, in the 2013 study year in Sitka, about 70% of the harvests of wild resources as estimated in usable pounds were harvested by 14% of the community’s households. This is greater specialization than what was found in Wolfe et al.’s (2010) study, but is relatively in line with what other comprehensive studies have found recently in other communities. In the 5 communities surveyed in Southeast Alaska for 2012, Hoonah and Haines had similar specialization with 19% and 20% of the households, respectively, harvesting 70% of the community harvest (see Table 2-29 in the section “Conclusion”). In Nikiski in 2014, the number was 18% of households (Jones and Kostick 2016), and in Healy in 2014 it was 15% (Marylynne Kostick, Research Analyst, ADF&G Division of Subsistence, Anchorage, Nov. 2016, personal communication). Further analysis of the study findings, beyond the scope of this report, might identify characteristics of the highly productive households in Sitka and the other study communities.

HARVEST QUANTITIES AND COMPOSITION

Table 2-12 reports estimated wild resource harvests and uses by Sitka residents in 2013 and is organized first by general category and then by species. All edible resources are reported in pounds usable weight (see Appendix B for conversion factors⁵). The harvest category includes resources harvested by any member of the surveyed household during the study year. The use category includes all resources taken, given away, or used by a household, and resources acquired from other harvesters, either as gifts, by barter or trade, through hunting partnerships, or as meat given by hunting guides and non-local hunters. Purchased foods are not included, but resources such as firewood are included because they are an important part of the subsistence way of life. Differences between harvest and use percentages reflect sharing among households, which results in a wider distribution of wild foods.

By weight, nonsalmon fish composed the largest percentage (39%) of the overall harvest (Figure 2-13). This was followed by salmon (26%), large land mammals (15%), marine invertebrates (11%), and vegetation (7%). The harvest was completed with small percentages of marine mammals (2%), birds and eggs (<1%), and small land mammals (<1%). For all resources combined, Sitkans harvested an estimated 1,377,571 lb in 2013, or 175 lb per capita (Table 2-12). Nonsalmon fish (such as Pacific halibut, herring, and cod) contributed the most to the overall harvest estimate with 538,694 lb harvested overall, or 68 lb per capita. The next greatest resource category harvested was salmon with 365,805 lb harvested, or 47 lb per capita. Large land mammals followed with 203,304 lb total, or 26 lb per capita. These three resource categories accounted for more than 75% of the total harvest in Sitka. Of the remaining resource categories, marine invertebrates were most harvested with 146,387 lb (19 lb per capita), followed by vegetation with 94,405 lb total, or 12 lb per capita. Sitkans harvested 24,225 lb of marine mammals (3 lb per capita). Birds and eggs (3,695 lb) and edible small land mammals (1,057 lb) were harvested in the smallest quantities; each category contributed less than 1 lb per capita.

SEASONAL ROUND

Harvest survey data and previous key respondent interviews provide information about the seasonal round of fishing, hunting, and gathering activities followed by Sitka residents where a variety of species are harvested throughout the year. The majority of the fishing effort occurs in the marine waters of Sitka Sound and the western coast of Baranof Island, Peril Strait, and Hoonah Sound, and in the freshwater systems nearby the community. Hunting effort is concentrated on the western coast of Baranof Island, along the many islands and inlets of Sitka Sound, and along Peril Strait and Hoonah Sound. Residents use motorized boats suitable for travel on waterways and vehicles along the road system around Sitka to access their hunting, fishing, and gathering areas.

Many resources harvested for food can be found year-round in the lands and waters around Sitka. Some harvest effort, such as that for deer, is constrained temporally by regulations while other species, such as Pacific halibut, have no such restrictions on the time of harvest. Nevertheless, a pattern emerges of the harvesting efforts of Sitka residents with the harvest of some species taking on more importance at certain times of the year. Resources generally become more abundant and harvest efforts expand through the springtime into the summer, which is the busiest and most abundant time of year. During the fall, harvesting efforts slow down and available resources become less diverse through the winter months, which are generally the least abundant months.

5. Resources that are not eaten, such as firewood and some furbearers, are included in the table but are given a conversion factor of zero.

Table 2-12.—Estimated uses and harvests of fish, game, and vegetation resources, Sitka, 2013.

Resource	Percentage of households					Harvest weight (lb)			Harvest amount ^a			95% confidence limit (±) harvest
	Use %	Attempt %	Harvest %	Receive %	Give %	Total	Mean per household	Per capita	Total	Unit	Mean per household	
All resources	98.5	91.0	90.6	92.3	76.4	1,377,570.6	464.6	175.0				34.4
Salmon	88.0	58.3	54.3	65.7	45.6	365,804.5	123.4	46.5				28.1
Chum salmon	16.8	13.0	12.1	6.2	6.2	10,458.1	3.5	1.3	1,731.9 ind		0.6	59.0
Coho salmon	57.1	41.1	38.6	28.7	27.1	67,814.4	22.9	8.6	15,863.0 ind		5.4	31.7
Chinook salmon	78.3	51.4	46.5	47.5	34.0	156,889.7	52.9	19.9	16,761.7 ind		5.7	38.8
Pink salmon	24.2	21.8	19.3	7.4	9.3	20,972.0	7.1	2.7	8,161.6 ind		2.8	60.7
Sockeye salmon	45.6	27.6	24.9	31.1	23.9	109,573.2	37.0	13.9	24,555.9 ind		8.3	39.4
Unknown salmon	4.3	0.9	0.2	4.1	0.0	97.1	0.0	0.0	17.8 ind		0.0	179.8
Nonsalmon fish	90.6	55.3	53.7	72.6	43.1	538,694.3	181.7	68.4				68.5
Pacific herring	17.7	14.6	13.9	4.0	4.3	25,868.4	8.7	3.3	4,311.4 gal		1.5	65.7
Pacific herring roe/unspecified	0.9	0.7	0.7	0.2	0.0	6,420.0	2.2	0.8	1,625.9 gal		0.5	192.5
Pacific herring sac roe	0.7	0.7	0.7	0.0	0.0	85.6	0.0	0.0	21.7 gal		0.0	0.0
Pacific herring spawn on kelp	9.0	4.7	4.7	5.5	5.1	4,297.2	1.4	0.5	1,088.3 gal		0.4	78.1
Pacific herring roe on hair seaweed	2.1	1.7	1.7	0.4	1.1	1,474.2	0.5	0.2	373.4 gal		0.1	148.8
Pacific herring roe on hemlock branches	32.5	7.5	7.5	27.7	12.9	58,213.8	19.6	7.4	14,743.2 gal		5.0	45.0
Eulachon (hooligan, candlefish)	4.1	0.0	0.0	4.1	1.2	0.0	0.0	0.0	0.0 gal		0.0	0.0
Silver smelt	1.1	0.9	0.9	0.2	0.0	665.5	0.2	0.1	73.9 gal		0.0	170.7
Pacific (gray) cod	6.9	5.8	5.8	2.8	3.9	46,994.0	15.8	6.0	14,685.6 ind		5.0	177.7
Pacific tomcod	1.7	1.7	1.7	0.0	0.0	63.1	0.0	0.0	126.2 ind		0.0	134.7
Flounder	1.5	0.7	0.7	0.7	0.7	65.0	0.0	0.0	21.7 ind		0.0	0.0
Lingcod	26.2	23.1	21.0	7.9	8.3	25,988.6	8.8	3.3	4,125.2 ind		1.4	102.5
Pacific halibut	74.5	39.5	32.7	51.8	27.7	285,317.1	96.2	36.2	285,317.1 lb		96.2	78.1
Perch	0.7	0.0	0.0	0.7	0.7	0.0	0.0	0.0	0.0 ind		0.0	0.0
Black rockfish	24.4	19.1	16.2	11.5	6.7	10,009.5	3.4	1.3	5,004.8 ind		1.7	53.0
Yelloweye rockfish	40.2	31.4	29.2	17.5	11.9	16,727.8	5.6	2.1	5,575.9 ind		1.9	46.9
Quillback rockfish	3.1	3.1	3.1	0.7	1.5	733.2	0.2	0.1	244.4 ind		0.1	102.9
Dusky rockfish	0.7	0.7	0.7	0.0	0.7	130.1	0.0	0.0	65.0 ind		0.0	192.5
Copper rockfish	1.5	1.5	1.5	0.7	0.0	780.4	0.3	0.1	260.1 ind		0.1	135.5
Unknown rockfish	9.8	5.9	5.9	5.3	2.1	2,388.0	0.8	0.3	937.3 ind		0.3	69.2
Sablefish (black cod)	26.2	5.7	5.0	21.4	7.9	46,636.6	15.7	5.9	11,659.1 ind		3.9	179.0
Buffalo sculpin	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0 ind		0.0	0.0

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Table 2-12.—Page 2 of 7.

Resource	Percentage of households					Harvest weight (lb)			Harvest amount ^a		95% confidence limit (±) harvest
	Use %	Attempt %	Harvest %	Receive %	Give %	Total	Mean per household	Per capita	Total	Unit	
Nonsalmon fish, continued											
Red Irish lord	0.2	0.2	0.2	0.0	0.0	5.9	0.0	0.0	5.9 ind	0.0	179.8
Shark	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0 ind	0.0	0.0
Skates	1.5	1.5	0.7	0.7	0.7	325.2	0.1	0.0	65.0 ind	0.0	0.0
Sole	0.7	0.0	0.0	0.7	0.7	0.0	0.0	0.0	0.0 ind	0.0	0.0
Dolly Varden	7.1	6.5	6.3	0.7	1.7	3,518.5	1.2	0.4	1,172.8 ind	0.4	81.5
Cutthroat trout	2.4	2.4	2.4	0.0	0.7	171.5	0.1	0.0	114.3 ind	0.0	120.7
Rainbow trout	3.9	4.3	3.9	0.0	0.7	1,119.6	0.4	0.1	559.8 ind	0.2	106.4
Steelhead	1.9	1.1	1.1	0.7	1.5	653.8	0.2	0.1	76.9 ind	0.0	164.0
Unknown trout	0.9	0.7	0.7	0.2	0.2	41.5	0.0	0.0	21.7 ind	0.0	192.5
Unknown whitefishes	0.2	0.0	0.0	0.2	0.0	0.0	0.0	0.0	0.0 ind	0.0	0.0
Large land mammals	62.1	36.9	25.9	45.6	23.0	203,303.6	68.6	25.8			35.1
Black bear	0.2	0.7	0.0	0.2	0.0	0.0	0.0	0.0	0.0 ind	0.0	0.0
Brown bear	0.9	0.7	0.7	0.2	0.0	3,251.8	1.1	0.4	21.7 ind	0.0	192.5
Caribou	4.3	0.0	0.0	4.3	0.7	0.0	0.0	0.0	0.0 ind	0.0	0.0
Deer	56.2	36.9	25.9	35.8	21.3	200,051.8	67.5	25.4	2,500.6 ind	0.8	35.3
Elk	2.4	0.0	0.0	2.4	0.0	0.0	0.0	0.0	0.0 ind	0.0	0.0
Mountain goat	2.6	0.7	0.0	2.6	0.7	0.0	0.0	0.0	0.0 ind	0.0	0.0
Moose	11.9	1.7	0.0	11.9	0.9	0.0	0.0	0.0	0.0 ind	0.0	0.0
Dall sheep	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0 ind	0.0	0.0
Small land mammals	4.1	5.2	4.1	0.7	1.5	1,056.8	0.4	0.1			125.4
Beaver	1.7	1.7	1.7	0.0	0.7	948.5	0.3	0.1	132.2 ind	0.0	138.2
Coyote	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0 ind	0.0	0.0
Red fox	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0 ind	0.0	0.0
Snowshoe hare	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0 ind	0.0	0.0
North American river (land) otter	0.9	0.9	0.9	0.0	0.7	0.0	0.0	0.0	841.9 ind	0.3	174.4
Lynx	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0 ind	0.0	0.0
Marmot	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0 ind	0.0	0.0
Marten	2.4	3.5	2.4	0.7	0.7	0.0	0.0	0.0	2,087.7 ind	0.7	160.8
Mink	1.9	1.9	1.9	0.0	0.0	0.0	0.0	0.0	722.0 ind	0.2	114.2
Muskrat	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0 ind	0.0	0.0
Porcupine	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0 ind	0.0	0.0
Red (tree) squirrel	0.7	0.7	0.7	0.0	0.0	108.4	0.0	0.0	216.8 ind	0.1	192.5

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Table 2-12.—Page 3 of 7.

Resource	Percentage of households					Harvest weight (lb)			Harvest amount ^a		95% confidence limit (±) harvest
	Use %	Attempt %	Harvest %	Receive %	Give %	Total	Mean per household	Per capita	Total	Unit	
Small land mammals, continued											
Least weasel	0.2	0.2	0.2	0.0	0.0	0.0	0.0	0.0	23.8 ind	0.0	179.8
Gray wolf	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0 ind	0.0	0.0
Wolverine	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0 ind	0.0	0.0
Marine mammals	10.6	3.7	3.3	8.9	2.2	24,224.6	8.2	3.1			117.3
Fur seal	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0 ind	0.0	0.0
Harbor seal	7.4	2.4	1.6	6.8	2.0	23,036.4	7.8	2.9	274.2 ind	0.1	120.1
Unknown seal	0.6	0.0	0.0	0.6	0.4	0.0	0.0	0.0	0.0 ind	0.0	0.0
Sea otter	3.1	2.4	2.2	1.1	0.0	0.0	0.0	0.0	468.0 ind	0.2	684.6
Steller sea lion	0.2	0.2	0.2	0.0	0.2	1,188.1	0.4	0.2	5.9 ind	0.0	179.8
Unknown whale	0.2	0.0	0.0	0.2	0.0	0.0	0.0	0.0	0.0 ind	0.0	0.0
Unknown marine mammals	0.7	0.0	0.0	0.7	0.0	0.0	0.0	0.0	0.0 ind	0.0	0.0
Birds and eggs	10.3	9.4	8.5	1.9	1.5	3,694.8	1.2	0.5			95.8
Goldeneye	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0 ind	0.0	0.0
Mallard	7.0	6.8	6.8	0.9	0.7	1,275.2	0.4	0.2	1,275.2 ind	0.4	91.5
Long-tailed duck	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0 ind	0.0	0.0
Northern pintail	2.2	2.2	2.2	0.0	0.7	390.2	0.1	0.0	390.2 ind	0.1	135.5
Scaup	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0 ind	0.0	0.0
Teal	4.1	4.1	4.1	0.7	0.7	277.8	0.1	0.0	534.3 ind	0.2	96.5
American wigeon	3.1	3.1	2.4	0.7	1.5	529.5	0.2	0.1	404.2 ind	0.1	121.3
Unknown ducks	0.7	0.7	0.7	0.0	0.0	20.6	0.0	0.0	21.7 ind	0.0	192.5
Brant	0.7	0.7	0.7	0.0	0.0	208.1	0.1	0.0	173.4 ind	0.1	192.5
Canada goose	2.9	3.1	2.2	0.7	0.7	593.1	0.2	0.1	173.4 ind	0.1	131.1
White-fronted goose	0.0	0.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0 ind	0.0	0.0
Unknown geese	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0 ind	0.0	0.0
Swans	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0 ind	0.0	0.0
Sandhill crane	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0 ind	0.0	0.0
Black oystercatcher	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0 ind	0.0	0.0
Unknown shorebirds – small	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0 ind	0.0	0.0
Unknown shorebirds – large	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0 ind	0.0	0.0
Guillemot	0.7	0.7	0.7	0.0	0.0	43.4	0.0	0.0	43.4 ind	0.0	192.5
Unknown loon	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0 ind	0.0	0.0
Unknown seabirds	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0 ind	0.0	0.0

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Table 2-12.—Page 4 of 7.

Resource	Percentage of households					Harvest weight (lb)			Harvest amount ^a			95% confidence
	Use %	Attempt	Harvest	Receive	Give	Total	Mean per household	Per capita	Total	Unit	Mean per household	limit (±) harvest
		%	%	%	%							
Birds and eggs, continued												
Grouse	0.2	0.0	0.0	0.2	0.0	10.0	0.0	0.0	10.0 ind		0.0	0.0
Ptarmigan	0.7	0.7	0.7	0.0	0.0	346.9	0.1	0.0	346.9 ind		0.1	192.5
Mallard eggs	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0 ind		0.0	0.0
Unknown duck eggs	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0 ind		0.0	0.0
Canada goose eggs	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0 ind		0.0	0.0
Unknown goose eggs	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0 ind		0.0	0.0
Swan eggs	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0 ind		0.0	0.0
Crane eggs	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0 ind		0.0	0.0
Black oystercatcher eggs	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0 ind		0.0	0.0
Unknown shorebird eggs – small	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0 ind		0.0	0.0
Unknown shorebird eggs – large	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0 ind		0.0	0.0
Glaucous-winged gull eggs	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0 ind		0.0	0.0
Unknown loon eggs	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0 ind		0.0	0.0
Tern eggs	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0 ind		0.0	0.0
Unknown seabird eggs	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0 ind		0.0	0.0
Grouse eggs	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0 ind		0.0	0.0
Ptarmigan eggs	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0 ind		0.0	0.0
Marine invertebrates	64.4	37.9	37.3	49.7	31.6	146,387.2	49.4	18.6				49.5
Abalone	2.6	2.8	2.4	0.9	0.2	304.9	0.1	0.0	145.2 gal		0.0	148.0
Red (large) chitons	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0 gal		0.0	0.0
Black (small) chitons	4.5	3.0	2.8	2.1	1.6	1,731.5	0.6	0.2	230.9 gal		0.1	67.3
Butter clams	11.0	9.7	9.7	1.2	5.6	9,229.1	3.1	1.2	2,074.0 gal		0.7	67.1
Horse clams	1.7	1.7	1.7	0.2	0.9	541.2	0.2	0.1	121.6 gal		0.0	137.1
Pacific littleneck clams (steamers)	7.8	6.3	6.3	2.2	3.3	3,442.9	1.2	0.4	1,147.6 gal		0.4	87.4
Razor clams	1.9	1.5	1.5	0.4	0.7	476.9	0.2	0.1	119.2 gal		0.0	175.7
Unknown clams	1.1	0.2	0.2	0.9	0.0	41.5	0.0	0.0	10.0 gal		0.0	179.8
Basket (large) cockles	6.2	4.9	4.7	2.5	1.5	671.8	0.2	0.1	216.0 gal		0.1	91.9
Heart (small) cockles	1.0	0.4	0.4	0.6	0.4	1,293.3	0.4	0.2	415.8 gal		0.1	137.8
Unknown cockles	0.6	0.0	0.0	0.6	0.0	15.6	0.0	0.0	5.0 gal		0.0	0.0
Dungeness crab	47.1	25.7	23.8	26.9	14.5	22,221.0	7.5	2.8	16,834.1 ind		5.7	41.2
Blue king crab	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0 ind		0.0	0.0

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Table 2-12.—Page 5 of 7.

Resource	Percentage of households					Harvest weight (lb)			Harvest amount ^a			95% confidence
	Use %	Attempt %	Harvest %	Receive %	Give %	Total	Mean per household	Per capita	Total	Unit	Mean per household	limit (±) harvest
Marine invertebrates, continued												
Brown king crab	0.9	0.0	0.0	0.9	0.0	0.0	0.0	0.0	0.0 ind		0.0	0.0
Red king crab	12.8	4.3	4.3	8.6	3.0	4,023.2	1.4	0.5	747.8 ind		0.3	77.8
Tanner crab	11.8	5.7	5.7	6.8	3.3	34,508.9	11.6	4.4	17,254.4 ind		5.8	146.4
Unknown crab	0.2	0.0	0.0	0.2	0.0	0.0	0.0	0.0	0.0 ind		0.0	0.0
Geoducks	1.9	0.7	0.7	1.1	0.7	130.1	0.0	0.0	43.4 gal		0.0	192.5
Limpets	0.2	0.2	0.2	0.0	0.0	0.3	0.0	0.0	0.2 gal		0.0	179.8
Mussels	0.9	0.2	0.2	0.7	0.2	44.6	0.0	0.0	29.7 gal		0.0	179.8
Octopus	6.9	3.6	3.4	3.3	1.9	1,140.1	0.4	0.1	1,140.1 lb		0.4	122.2
Oyster	0.7	0.0	0.0	0.7	0.0	0.0	0.0	0.0	0.0 gal		0.0	0.0
Weathervane scallops	0.2	0.0	0.0	0.2	0.0	0.0	0.0	0.0	0.0 gal		0.0	0.0
Rock scallops	0.2	0.2	0.2	0.0	0.2	3.0	0.0	0.0	1.8 gal		0.0	179.8
Sea cucumber	2.9	2.2	2.2	0.7	0.0	1,149.0	0.4	0.1	1,149.0 lb		0.4	181.8
Green sea urchin	1.5	1.5	1.5	0.0	0.0	218.8	0.1	0.0	109.4 gal		0.0	190.8
Red sea urchin	0.9	0.9	0.9	0.0	0.0	20.2	0.0	0.0	11.9 gal		0.0	179.8
Purple sea urchin	1.5	1.5	1.5	0.0	0.0	186.0	0.1	0.0	109.4 gal		0.0	190.8
Shrimp	37.0	17.9	17.9	26.1	16.6	64,993.6	21.9	8.3	64,993.6 lb		21.9	63.2
Squid	0.7	0.0	0.0	0.7	0.0	0.0	0.0	0.0	0.0 lb		0.0	0.0
Vegetation	84.2	80.2	80.0	41.2	41.2	94,404.8	31.8	12.0				27.5
Blueberry	66.1	61.4	61.4	14.0	23.0	15,226.3	5.1	1.9	3,806.6 gal		1.3	23.9
Lowbush cranberry	6.0	5.2	5.0	1.7	1.9	995.2	0.3	0.1	248.8 gal		0.1	90.0
Highbush cranberry	0.7	0.0	0.0	0.7	0.0	0.0	0.0	0.0	0.0 gal		0.0	0.0
Crowberry	0.2	0.2	0.2	0.0	0.2	3.0	0.0	0.0	0.7 gal		0.0	179.8
Elderberry	1.3	1.3	1.3	0.0	0.6	908.4	0.3	0.1	227.1 gal		0.1	125.0
Gooseberry	0.4	0.4	0.4	0.0	0.2	249.5	0.1	0.0	62.4 gal		0.0	171.3
Currants	2.9	2.9	2.9	0.0	1.2	1,569.1	0.5	0.2	392.3 gal		0.1	86.7
Huckleberry	55.8	53.7	53.7	10.9	22.7	25,037.9	8.4	3.2	6,259.5 gal		2.1	68.0
Cloudberry	1.9	1.9	1.9	0.0	0.0	86.5	0.0	0.0	21.6 gal		0.0	113.0
Nagoonberry	2.4	0.9	0.9	1.5	0.2	58.4	0.0	0.0	14.6 gal		0.0	150.7
Raspberry	7.7	5.8	5.8	2.1	2.8	936.8	0.3	0.1	234.2 gal		0.1	69.9
Salmonberry	62.5	57.6	57.4	17.6	18.0	27,209.7	9.2	3.5	6,802.4 gal		2.3	36.1
Soapberry	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0 gal		0.0	0.0
Strawberry	5.5	5.5	5.5	1.5	2.1	1,103.4	0.4	0.1	275.8 gal		0.1	127.5

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Table 2-12.—Page 6 of 7.

Resource	Percentage of households					Harvest weight (lb)			Harvest amount ^a			95% confidence limit (±) harvest
	Use %	Attempt %	Harvest %	Receive %	Give %	Total	Mean per household	Per capita	Total	Unit	Mean per household	
Vegetation, continued												
Thimbleberry	3.5	2.8	2.8	0.7	0.7	41.0	0.0	0.0	10.2 gal		0.0	85.0
Twisted stalk berry (watermelon berry)	2.6	2.6	2.6	0.0	0.0	39.4	0.0	0.0	9.9 gal		0.0	120.7
Other wild berry	1.1	0.9	0.9	0.9	0.2	367.3	0.1	0.0	91.8 gal		0.0	174.6
Beach asparagus	11.9	6.7	6.7	6.4	2.3	764.5	0.3	0.1	764.5 gal		0.3	97.5
Goose tongue	5.0	5.0	5.0	0.2	0.2	276.7	0.1	0.0	276.7 gal		0.1	94.4
Wild rhubarb	1.5	0.7	0.7	0.7	1.5	1,083.9	0.4	0.1	1,083.9 gal		0.4	192.5
Wild potato	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0 gal		0.0	0.0
Devil's club	6.6	4.9	4.9	2.0	3.2	385.8	0.1	0.0	385.8 gal		0.1	121.1
Fiddlehead ferns	7.4	7.4	7.4	0.2	2.1	223.6	0.1	0.0	223.6 gal		0.1	69.4
Nettle	0.7	0.0	0.0	0.7	0.7	0.0	0.0	0.0	0.0 gal		0.0	0.0
Hudson's Bay (Labrador) tea	9.1	7.3	7.3	2.6	3.3	649.8	0.2	0.1	649.8 gal		0.2	104.8
Indian rice	0.7	0.7	0.7	0.0	0.7	1.4	0.0	0.0	1.4 gal		0.0	192.5
Mint	0.9	0.9	0.9	0.0	0.9	1.4	0.0	0.0	1.4 gal		0.0	180.6
Salmonberry shoots	1.9	1.9	1.9	0.0	0.2	67.6	0.0	0.0	67.6 gal		0.0	137.6
Skunk cabbage	0.2	0.2	0.2	0.0	0.0	11.9	0.0	0.0	11.9 gal		0.0	179.8
Dandelion greens	0.4	0.4	0.4	0.0	0.2	3.3	0.0	0.0	3.3 gal		0.0	160.8
Sourdock	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0 gal		0.0	0.0
Spruce tips	8.2	7.3	7.3	2.1	3.9	514.8	0.2	0.1	514.8 gal		0.2	93.9
Wild celery	0.4	0.4	0.4	0.0	0.2	20.8	0.0	0.0	20.8 gal		0.0	137.8
Wild parsley	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0 gal		0.0	0.0
Wild rose hips	0.2	0.2	0.2	0.0	0.2	23.8	0.0	0.0	5.9 gal		0.0	179.8
Yarrow	0.7	0.7	0.7	0.0	0.7	21.7	0.0	0.0	21.7 gal		0.0	192.5
Unknown mushrooms	10.0	9.2	9.2	2.6	3.0	1,313.3	0.4	0.2	1,313.3 gal		0.4	91.4
Fireweed	1.7	1.7	1.7	0.7	0.7	60.7	0.0	0.0	60.7 gal		0.0	142.9
Stinkweed	0.7	0.7	0.7	0.0	0.7	21.7	0.0	0.0	21.7 gal		0.0	192.5
Unknown greens from land	4.6	4.6	4.6	0.0	2.2	223.3	0.1	0.0	223.3 gal		0.1	91.4
Black seaweed	17.2	7.4	7.4	12.9	4.7	8,214.8	2.8	1.0	39,706.5 gal		13.4	62.4
Bull kelp	4.6	3.7	3.7	0.9	0.7	4,666.6	1.6	0.6	8,693.2 gal		2.9	189.0
Red seaweed	2.6	1.5	1.5	1.1	0.2	715.4	0.2	0.1	238.5 gal		0.1	175.7
Sea ribbons	3.6	1.9	1.9	1.7	0.6	397.7	0.1	0.1	4,511.7 gal		1.5	138.7
Giant kelp (macrocystis)	0.7	0.7	0.7	0.0	0.0	43.4	0.0	0.0	119.2 gal		0.0	192.5

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Table 2-12.—Page 7 of 7.

Resource	Percentage of households					Harvest weight (lb)			Harvest amount ^a		95% confidence limit (±) harvest
	Use %	Attempt %	Harvest %	Receive %	Give %	Total	Mean per household	Per capita	Total	Unit	Mean per household
Vegetation, continued											
Alaria	0.7	0.0	0.0	0.7	0.0	0.0	0.0	0.0	0.0 gal		0.0
Bladder wrack	3.1	2.4	2.4	0.7	0.2	195.1	0.1	0.0	4,806.2 gal		192.5
Unknown seaweed ^b	7.2	6.2	5.5	3.2	1.5	670.0	0.2	0.1	28,535.1 gal		175.7
Wood	21.0	20.0	19.3	2.8	5.8	0.0	0.0	0.0	1,721.0 cord		49.3
Bark	0.7	0.7	0.7	0.0	0.0	0.0	0.0	0.0	21.7 gal		0.0
Spruce pitch	0.7	0.7	0.0	0.0	0.7	0.0	0.0	0.0	0.0 gal		0.0
Alder	0.7	0.7	0.7	0.0	0.0	0.0	0.0	0.0	21.7 cord		0.0
Other wood	1.5	0.7	0.7	1.5	0.0	0.0	0.0	0.0	21.7 cord		0.0

Source ADF&G Division of Subsistence household surveys, 2013.

Note Resources where the percentage using is greater than the combined received and harvest indicate use from resources obtained during a previous year.

Note For small land mammals, species that are not typically eaten show a non-zero harvest amount with a zero harvest weight. Harvest weight is not calculated for species harvested but not eaten.

Note "Unknown" means "unspecified" resources (i.e., respondents may have known the specific resource harvested, but that information was not collected during the survey.)

a. Summary rows that include incompatible units of measure have been left blank.

b. Amounts harvested for seaweed includes amounts used for fertilizer; these harvests were not converted into usable pounds.

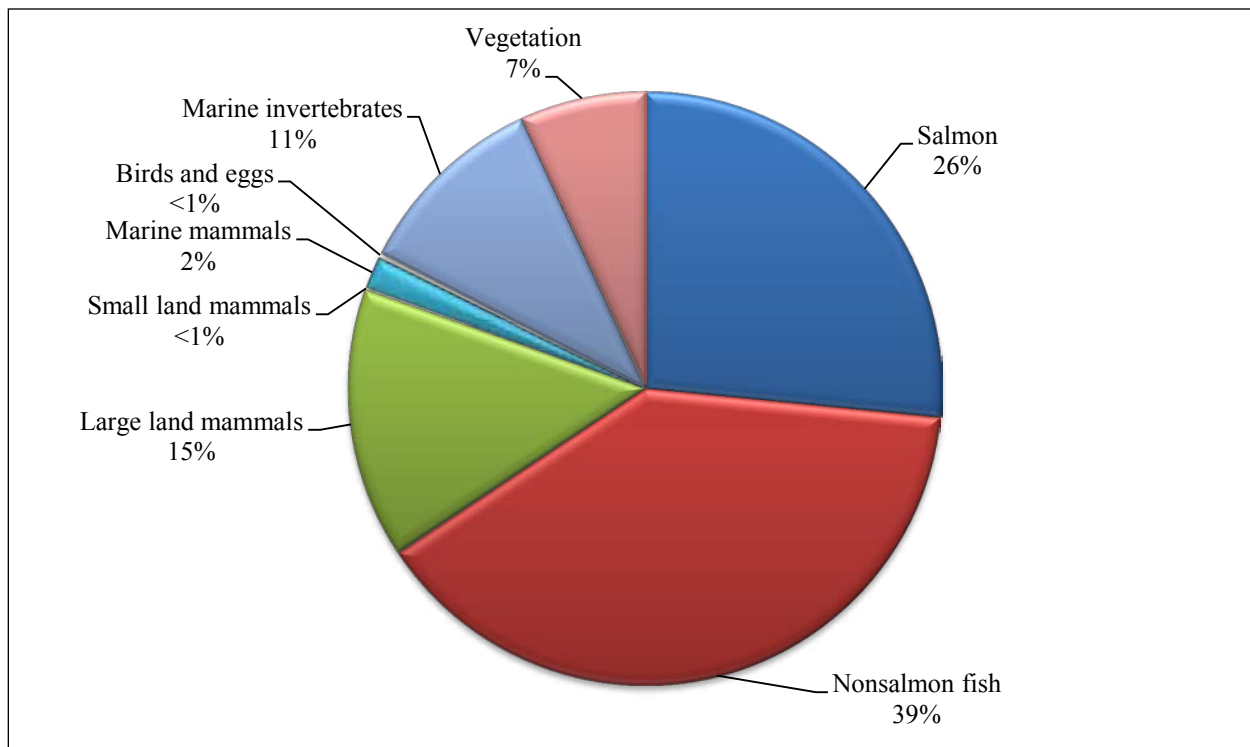


Figure 2-13.—Composition of harvest by resource category in pounds usable weight, Sitka, 2013.

Springtime is heralded by the arrival of spawning aggregations of Pacific herring. Sitka Sound is the main location for residents throughout Southeast Alaska to harvest Pacific herring roe (eggs) on hemlock branches, hair seaweed, or kelp. During the spring months, Chinook salmon are caught by rod and reel and trolling under sport fishing regulations. Pacific halibut is harvested with longlines under federal subsistence regulations or with rod and reel, under either federal subsistence regulations or state sport fish regulations. Trout, including Dolly Varden and steelhead, are available in the local lakes during the springtime. Trout can be harvested with rod and reel under state sport fish regulations or under federal subsistence regulations at this time of year. There is also an abundance of shellfish and marine invertebrates available for harvest in the springtime, including clams, cockles, chitons, shrimp, mussels, Dungeness crab, and king crab. The waters of Sitka Sound, Salisbury Sound, Peril Strait, and Hoonah Sound are heavily used for the harvest of shellfish, which is done under state sport fish or personal use regulations. Harbor seals are hunted during this time of year by Alaska Native residents of Sitka under an exception to the Marine Mammal Protection Act (MMPA). On land, plants begin growing and are harvested, such as fiddlehead ferns, devil's club, salmonberry shoots, fireweed, and wild celery and rhubarb. Black seaweed is collected from the ocean. Firewood is collected opportunistically year-round.

As spring gives way to summer, fishing efforts increase. All species of salmon are available to Sitka residents during the summer. All 5 types of salmon are harvested by rod and reel or trolling under state sport fish regulations. Sockeye salmon are most commonly harvested with a gillnet or dip net under state subsistence regulations; other salmon species are taken incidentally while sockeye salmon fishing. Bottomfishing opportunities expand from Pacific halibut to include rockfish, sablefish, lingcod, and other groundfish species. These are taken incidentally while Pacific halibut fishing under state or federal regulations. They are also targeted under state sport fish regulations. Trout are still harvested during the summer, as well as the shellfish and marine invertebrates that were harvested during the spring months. On land, the hunting season for deer begins in August. Both state and federal hunting regulations apply to deer hunting on Baranof Island. Summer is a time of plenty for plants and berries, including salmonberries, blueberries,

huckleberries, strawberries, nagoonberries, and cranberries. Beach greens, such as beach asparagus and goose tongue, are also harvested during the summer.

After the frenzy of the summer, fall begins a slowdown of harvesting activity. Shellfish and crabs are still collected and most species of salmon are still locally available, at least in the early fall. As the months pass, only Chinook salmon remain to be fished. Pacific halibut can still be caught in local waters, as can trout, for which there is a fall federal subsistence season. Along with spring, fall is a good time for hunting harbor seals. Deer hunting effort increases through the fall. Most deer hunting occurs with the use of boats along the waterways of Baranof Island, but vehicles and hiking are also used to access hunting areas. Migratory birds pass through the region during the fall and can be hunted under federal regulations. Plants and berries are still abundant in the early fall; Hudson's Bay tea is a commonly gathered plant during this time.

Deer hunting continues through the winter; under federal hunting regulations deer hunting can continue through January. Shellfish are still harvested during the winter, including king and Tanner crabs, which can be harvested under personal use regulations. Those residents who participate in trapping do so during the winter months. Furbearers such as beaver, marten, mink, and weasel can be trapped under both state and federal regulations. Trappers utilize boats and vehicles to engage in this activity.

Table 2-13.—Top ranked resources used by households, Sitka, 2013.

Rank ^a	Resource	Percentage of households using
1.	Chinook salmon	78.0%
2.	Pacific halibut	75.0%
3.	Blueberry	66.0%
4.	Salmonberry	62.0%
5.	Coho salmon	57.0%
6.	Deer	56.0%
6.	Huckleberry	56.0%
8.	Dungeness crab	47.0%
9.	Sockeye salmon	46.0%
10.	Yelloweye rockfish	40.0%

Source ADF&G Division of Subsistence household surveys, 2014.

a. Resources used by the same percentage of households share the highest rank value instead of having sequential rank values.

USE AND HARVEST CHARACTERISTICS BY RESOURCE CATEGORY

Wild resources are widely used and shared in Sitka. An estimated 98% of households in Sitka used a wild resource during 2013 (Table 2-12). More than 76% of households gave away a resource during this time period, while 92% of households received some resource. Salmon was the given by the greatest percentage of households, with 46% giving the resource and 66% receiving it. Nonsalmon fish was given by slightly fewer households (43%) but was received by more households (73%). Marine invertebrates was also a highly shared resource category, with 32% of households giving and 50% of households receiving a marine invertebrate. An equal number of households gave and received vegetation resources (41%). It is interesting to note that a greater percentage of households harvested vegetation than any other resource category, but sharing of the resource is still significant. Only 26% of households harvested large land mammals, and nearly the same proportion of households (23%) gave away these resources. Sharing is not only done by those who harvest; some households will receive a resource and further share it with another household. Large land mammals were received by 46% of households. The least shared resources were marine mammals (2% giving and 9% receiving), birds and eggs (2% giving and 2% receiving), and small land mammals (2% giving and 1% receiving). Even though sharing percentages are less for these resource categories, that does not preclude the fact that for those households among which the resources are shared, those resources can be very important.

Table 2-13 lists the top ranked resources used by households and Figure 2-14 shows the species with the highest per capita harvests during the 2013 study year. Chinook salmon was the resource used by the most households, followed closely by Pacific halibut (Table 2-13). Interestingly, the majority of the top resources used by Sitkans are fish (including crab) or berries; deer is the only species not in those 2 categories. In comparison, by weight, the most harvested species are also almost entirely in the fish/marine invertebrates categories (Figure 2-14). Deer is the only terrestrial species included in the top species harvested. This ranking likely reflects the marine focus of this ocean-front community. Many of these aquatic resources are available just outside the harbor in Sitka Sound.

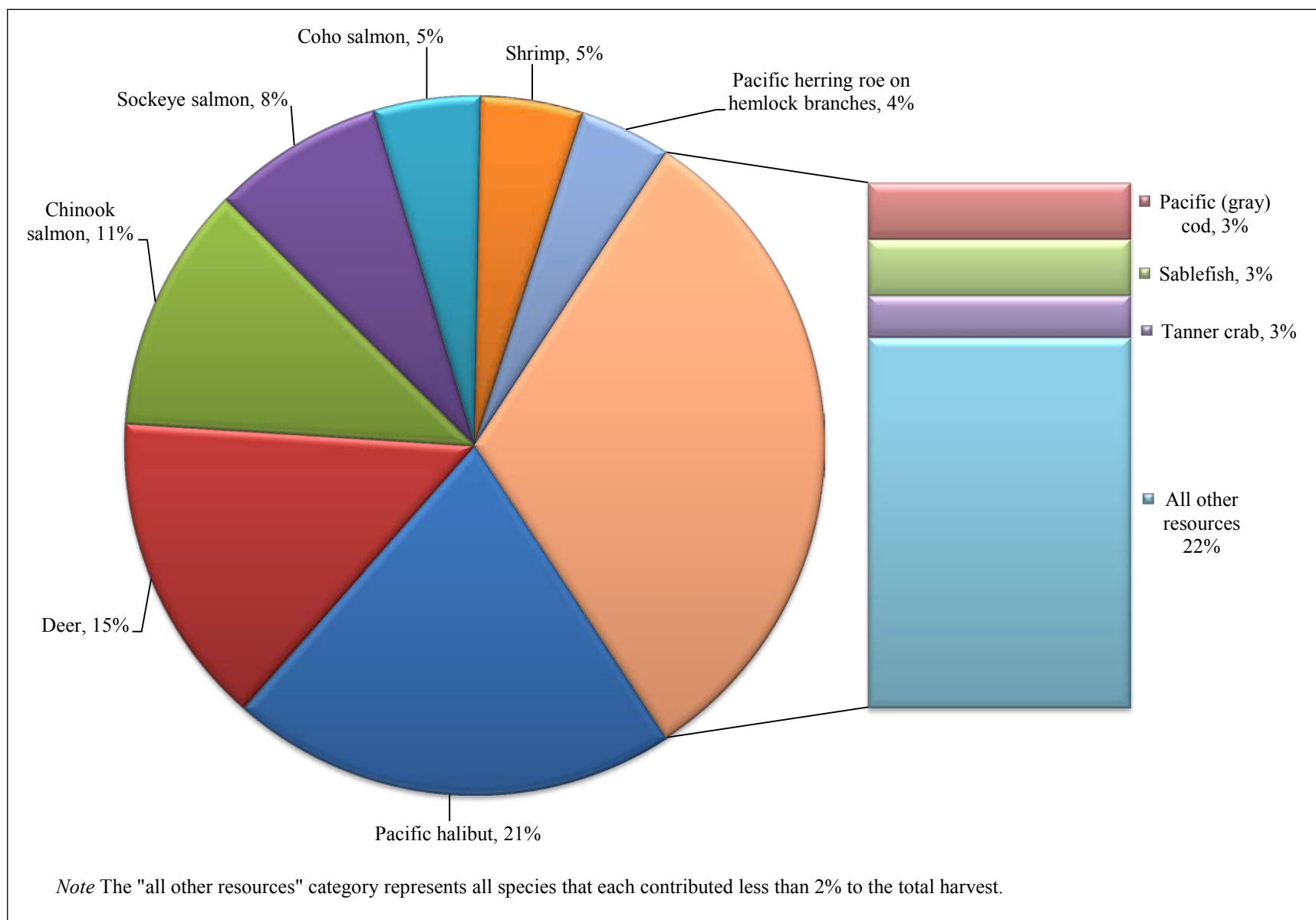


Figure 2-14.—Top species harvested by percentage of total harvest in pounds usable weight, Sitka, 2013.

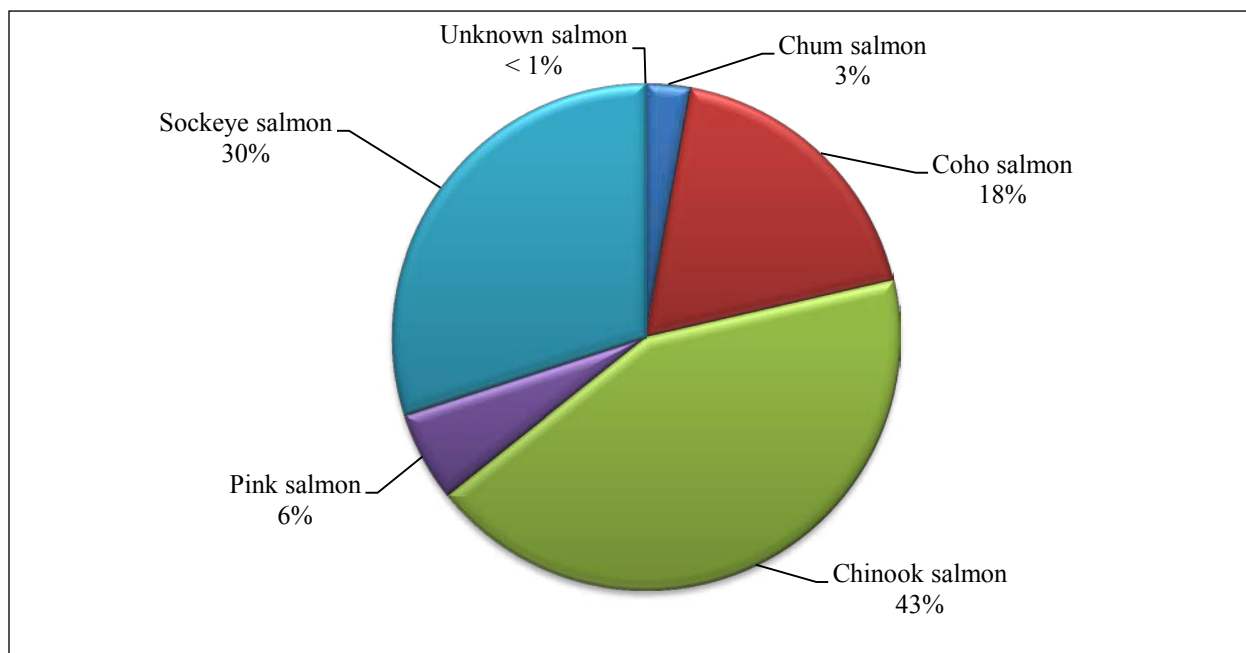


Figure 2-15.—Composition of salmon harvest in pounds usable weight, Sitka, 2013.

Salmon

Sitka households harvest every species of salmon. In 2013, Chinook and sockeye salmon composed the majority of the salmon harvest, at 43% and 30% of the salmon harvest, respectively (Figure 2-15). Coho salmon also accounted for a substantial amount (18%) of the harvest, while pink and chum salmon together composed just 9% of the harvest. Interestingly, more sockeye salmon were harvested (24,556 salmon) than Chinook salmon (16,762), but due to the overall larger size, the weight of harvested Chinook salmon (156,890 lb; 20 lb per capita) was greater than that of sockeye salmon (109,573 lb; 14 lb per capita) (Table 2-12). Coho salmon were the third most harvested salmon species in terms of numbers (15,863) and pounds (67,814 lb; 9 lb per capita). However, more households used coho salmon than sockeye salmon (57% compared to 46%). Chinook salmon was used, harvested, and shared by the most households (78% used, 47% harvested, 48% received, and 34% shared). While more households harvested and used coho salmon compared to sockeye salmon, only 29% of households received coho salmon, compared to 31% receiving sockeye salmon. Chum and pink salmon were used and shared as well, but at much smaller percentages than the other 3 species. Overall, 88% of households used salmon in 2013, while 54% harvested the resource. More than one-half of all households received salmon (66%) while just less than one-half (46%) gave it away.

An estimated 24,176 salmon (110,680 lb) were harvested using subsistence gear, 17,091 salmon (109,638 lb) were harvested by trolling, 16,802 salmon (92,078 lb) were harvested by rod and reel, and 9,023 salmon (53,409 lb) were removed from commercial harvests for home use (Table 2-14). Figure 2-16 is a visual representation of the number of salmon harvested by gear type. All species were removed from commercial catches, but chum and sockeye salmon were removed in the smallest amounts.

Table 2-14.—Estimated harvest of salmon by gear type and resource, Sitka, 2013.

Resource	Subsistence/personal use methods															
	Removed from commercial catch		Subsistence/personal use gear, any method								Trolling ^a		Rod and reel ^a		Any method	
			Gillnet or seine		Dip net		Other method									
	Number	Pounds	Number	Pounds	Number	Pounds	Number	Pounds	Number	Pounds	Number	Pounds	Number	Pounds	Number	Pounds
Salmon	9,022.9	53,409.1	16,146.4	71,866.5	7,958.6	38,371.5	71.0	441.8	24,176.0	110,679.7	17,091.2	109,637.7	16,801.8	92,078.0	67,092.0	365,804.5
Chum salmon	635.4	3,836.7	240.6	1,452.5	0.0	0.0	21.7	130.9	262.2	1,583.5	319.6	1,929.6	514.8	3,108.4	1,731.9	10,458.1
Coho salmon	2,089.2	8,931.2	206.2	881.6	43.4	185.4	21.7	92.7	271.3	1,159.7	6,608.1	28,249.5	6,894.5	29,474.1	15,863.0	67,814.4
Chinook salmon	3,568.5	33,400.9	0.0	0.0	585.3	5,478.7	21.7	202.9	607.0	5,681.6	7,764.1	72,671.5	4,822.2	45,135.7	16,761.7	156,889.7
Pink salmon	2,610.6	6,708.3	276.2	709.7	0.0	0.0	5.9	15.3	282.1	725.0	2,071.4	5,322.6	3,197.4	8,216.2	8,161.6	20,972.0
Sockeye salmon	119.2	532.0	15,423.5	68,822.6	7,329.9	32,707.4	0.0	0.0	22,753.4	101,530.0	328.2	1,464.5	1,355.1	6,046.6	24,555.9	109,573.2
Unknown salmon	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	17.8	97.1	17.8	97.1

Source ADF&G Division of Subsistence household surveys, 2014.

Note The harvested number of salmon is represented as individual fish harvested.

a. Gear type for trolling and rod and reel may overlap; trolling indicates use of gear from a moving vessel.

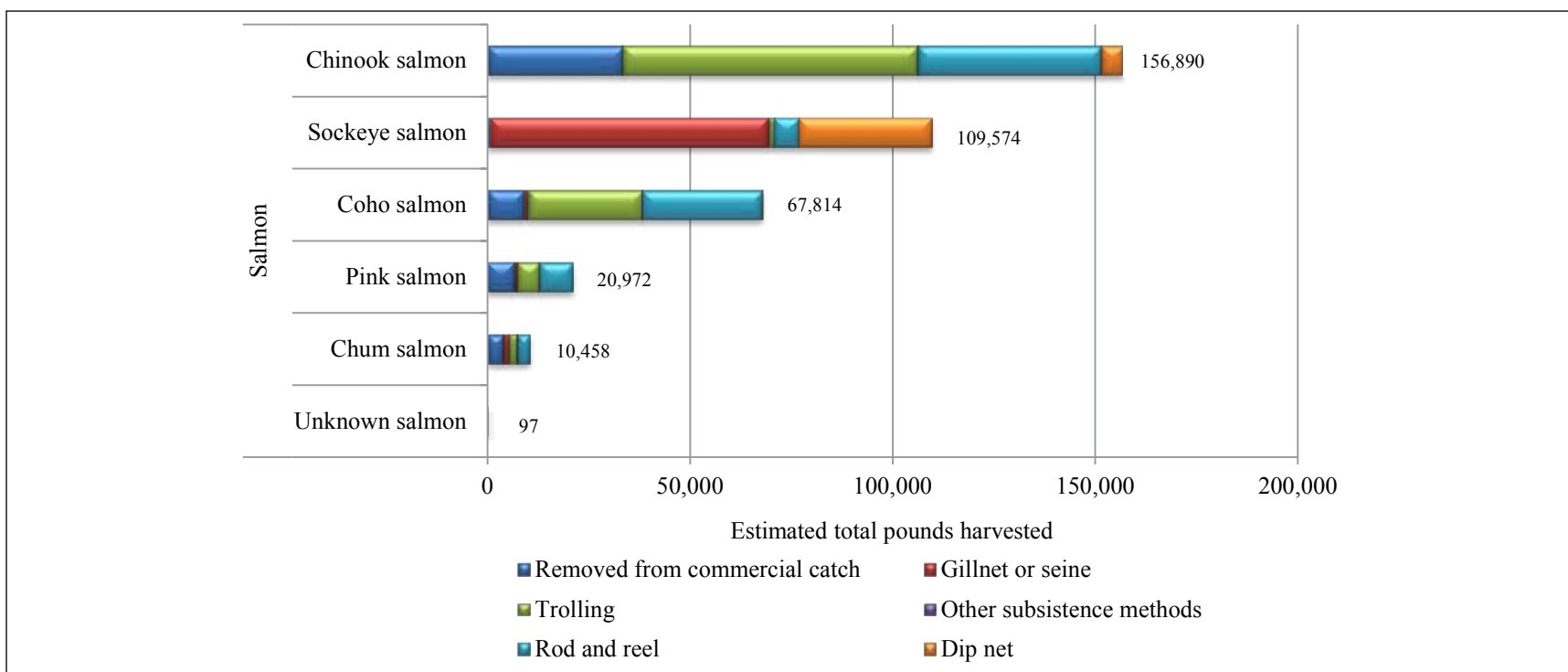


Figure 2-16.—Estimated harvest of salmon in pounds usable weight by gear type and resource, Sitka, 2013.

Nearly one-third of the salmon harvest weight was caught using subsistence gear, another one-third by trolling, and 25% was caught using rod and reel (Table 2-15). For 2 species, rod and reel fishing was the most commonly used harvest method: 44% of coho salmon, and 39% of pink salmon harvests. Trolling was the most commonly used harvest method for Chinook salmon (46%), while 93% of the sockeye salmon harvest was caught using subsistence gear. Chum salmon were most commonly harvested through removal from commercial catches (37%). For all species that were removed from commercial catches, Chinook salmon was most frequently removed (63% of overall removals), followed by coho salmon with 17% of overall removals. For the harvest by subsistence means, sockeye salmon was the predominant catch contributing 92% of the overall harvest weight. Chinook and coho salmon composed the majority of the troll harvest weight (66% and 26%, respectively). The rod and reel harvest comprised primarily Chinook salmon (49%) followed by coho salmon (32%).

Salmon were harvested primarily near Sitka. Fishing for Chinook salmon occurred in Sitka Sound and along the outside coast of Kruzof and Baranof islands as far north as Klag Bay (Figure 2-17). Chinook salmon were also harvested along Peril Strait and the inside shore of Baranof Island along Chatham Strait, as far south as Deep Cove. In addition, some harvest occurred in Chaik Bay, south of Angoon, as well as around the communities of Petersburg, Craig, and Tanana in Interior Alaska. Sockeye salmon were harvested in a more limited geographic scope, concentrating around the big sockeye salmon systems of Klag Bay, Redoubt Lake, and Redfish Bay (Figure 2-18). In addition, there was some sockeye salmon harvest in Sitka Sound, along Kruzof Island and south into Whale Bay. Coho salmon fishing locations were more similar to those for Chinook salmon, covering all of Sitka Sound and the outside coast of Kruzof and Baranof islands, from Necker Bay to Portlock Harbor (Figure 2-19). There was additional activity in Whale and Redfish bays, as well as along Chatham Strait near Warm Springs Bay and Deep Cove, and near the communities of Tenakee Springs, Petersburg, and Valdez. Fishing locations for chum and pink salmon can be found in Appendix C.

Table 2-15.—Estimated percentages of salmon harvested by gear type, resource, and total salmon harvest, Sitka, 2013.

Resource	Percentage base	Removed from commercial catch	Subsistence/personal use methods				Trolling ^a	Rod and reel ^a	Any method
			Gillnet or seine	Dip net	Other method	Subsistence/personal use gear, any method			
Salmon	Gear type	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
	Resource	14.6%	19.6%	10.5%	0.1%	30.3%	30.0%	25.2%	100.0%
	Total	14.6%	19.6%	10.5%	0.1%	30.3%	30.0%	25.2%	100.0%
Chum salmon	Gear type	7.2%	2.0%	0.0%	29.6%	1.4%	1.8%	3.4%	2.9%
	Resource	36.7%	13.9%	0.0%	1.3%	15.1%	18.5%	29.7%	100.0%
	Total	1.0%	0.4%	0.0%	0.0%	0.4%	0.5%	0.8%	2.9%
Coho salmon	Gear type	16.7%	1.2%	0.5%	21.0%	1.0%	25.8%	32.0%	18.5%
	Resource	13.2%	1.3%	0.3%	0.1%	1.7%	41.7%	43.5%	100.0%
	Total	2.4%	0.2%	0.1%	0.0%	0.3%	7.7%	8.1%	18.5%
Chinook salmon	Gear type	62.5%	0.0%	14.3%	45.9%	5.1%	66.3%	49.0%	42.9%
	Resource	21.3%	0.0%	3.5%	0.1%	3.6%	46.3%	28.8%	100.0%
	Total	9.1%	0.0%	1.5%	0.1%	1.6%	19.9%	12.3%	42.9%
Pink salmon	Gear type	12.6%	1.0%	0.0%	3.5%	0.7%	4.9%	8.9%	5.7%
	Resource	32.0%	3.4%	0.0%	0.1%	3.5%	25.4%	39.2%	100.0%
	Total	1.8%	0.2%	0.0%	0.0%	0.2%	1.5%	2.2%	5.7%
Sockeye salmon	Gear type	1.0%	95.8%	85.2%	0.0%	91.7%	1.3%	6.6%	30.0%
	Resource	0.5%	62.8%	29.8%	0.0%	92.7%	1.3%	5.5%	100.0%
	Total	0.1%	18.8%	8.9%	0.0%	27.8%	0.4%	1.7%	30.0%
Unknown salmon	Gear type	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.1%	0.0%
	Resource	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	100.0%
	Total	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%

Source ADF&G Division of Subsistence household surveys, 2014.

a. Gear type for trolling and rod and reel may overlap; trolling indicates use of gear from a moving vessel.

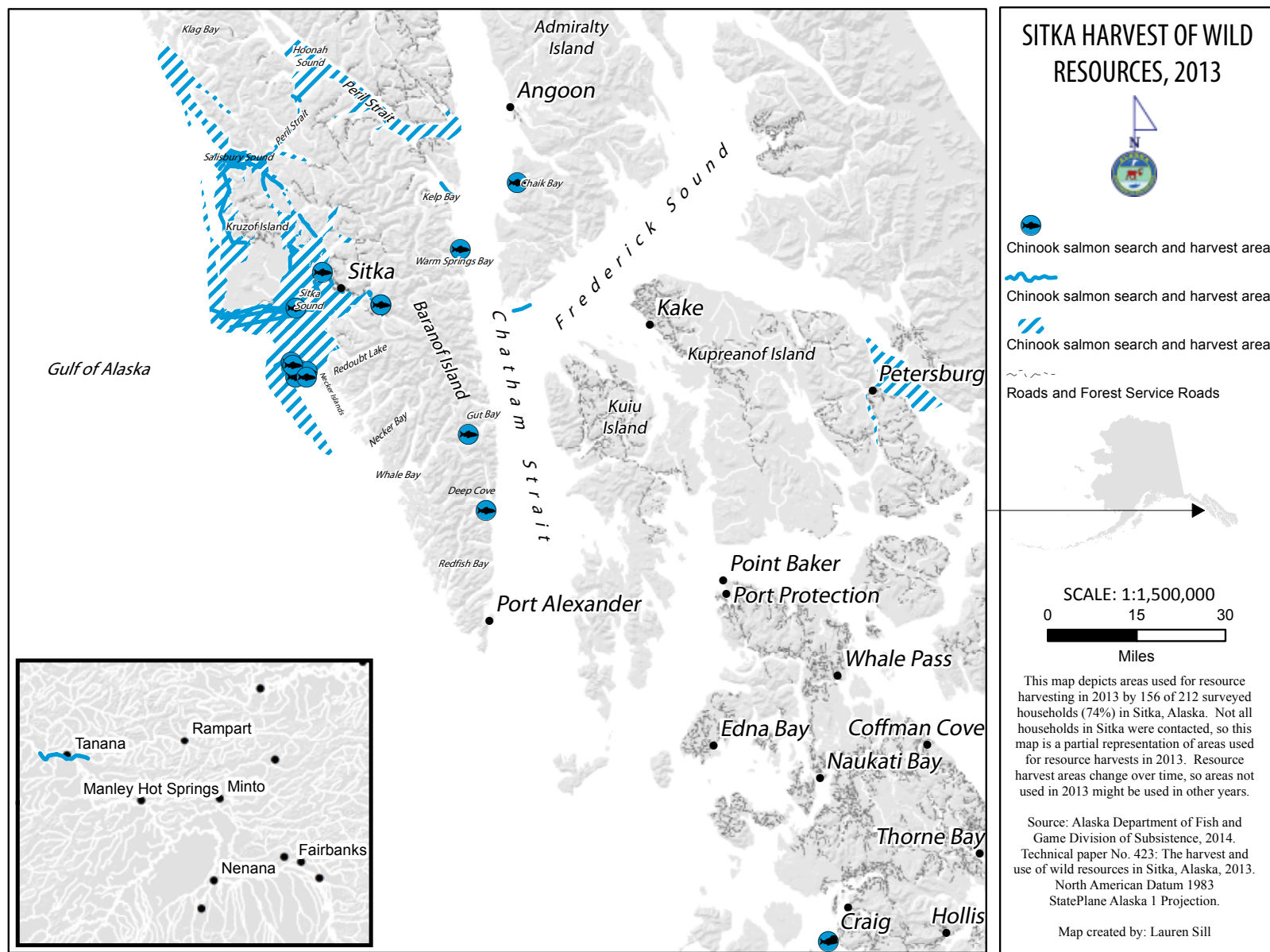


Figure 2-17.—Fishing and harvest locations of Chinook salmon, Sitka, 2013.

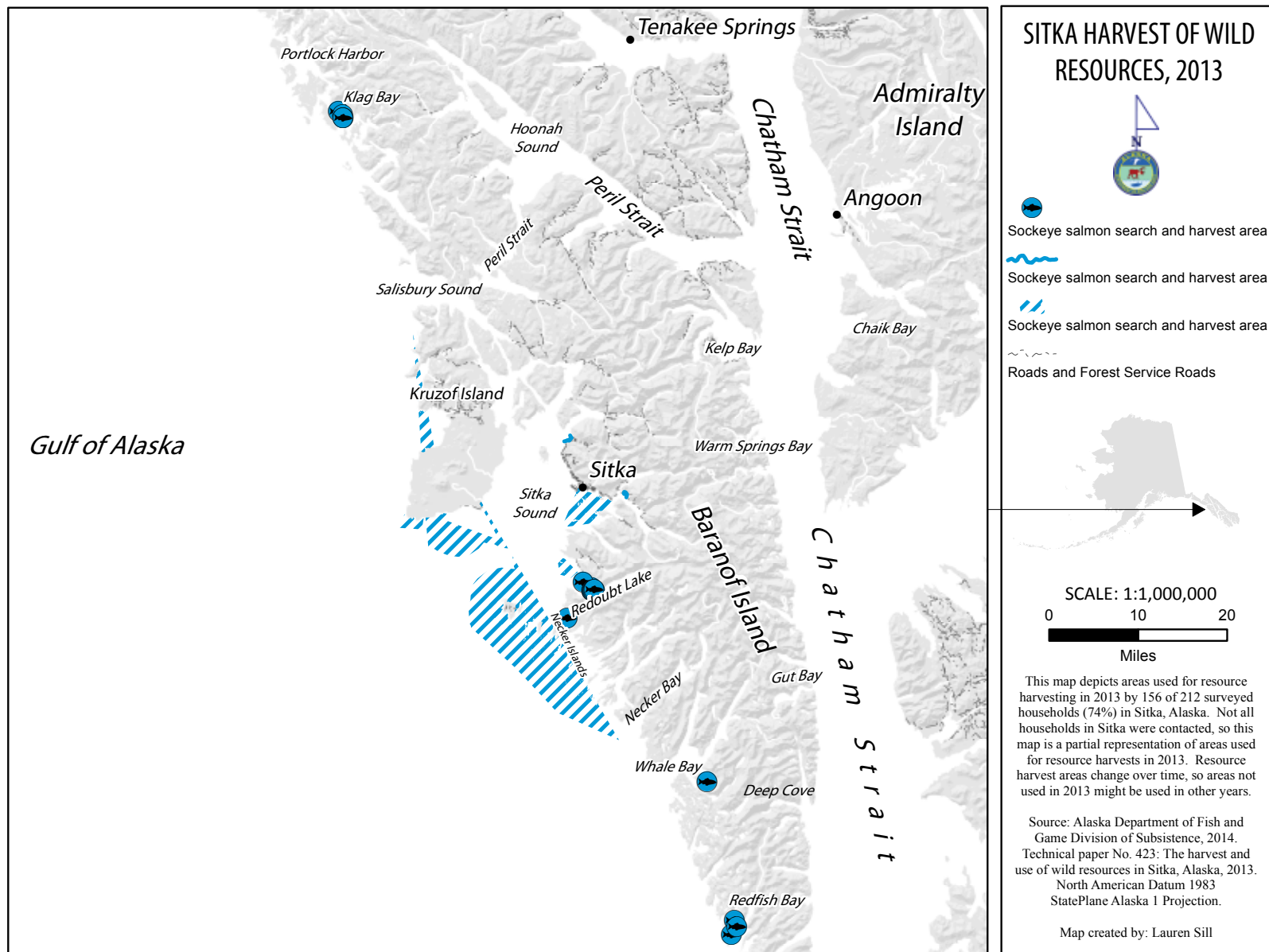


Figure 2-18.—Fishing and harvest locations of sockeye salmon, Sitka, 2013.

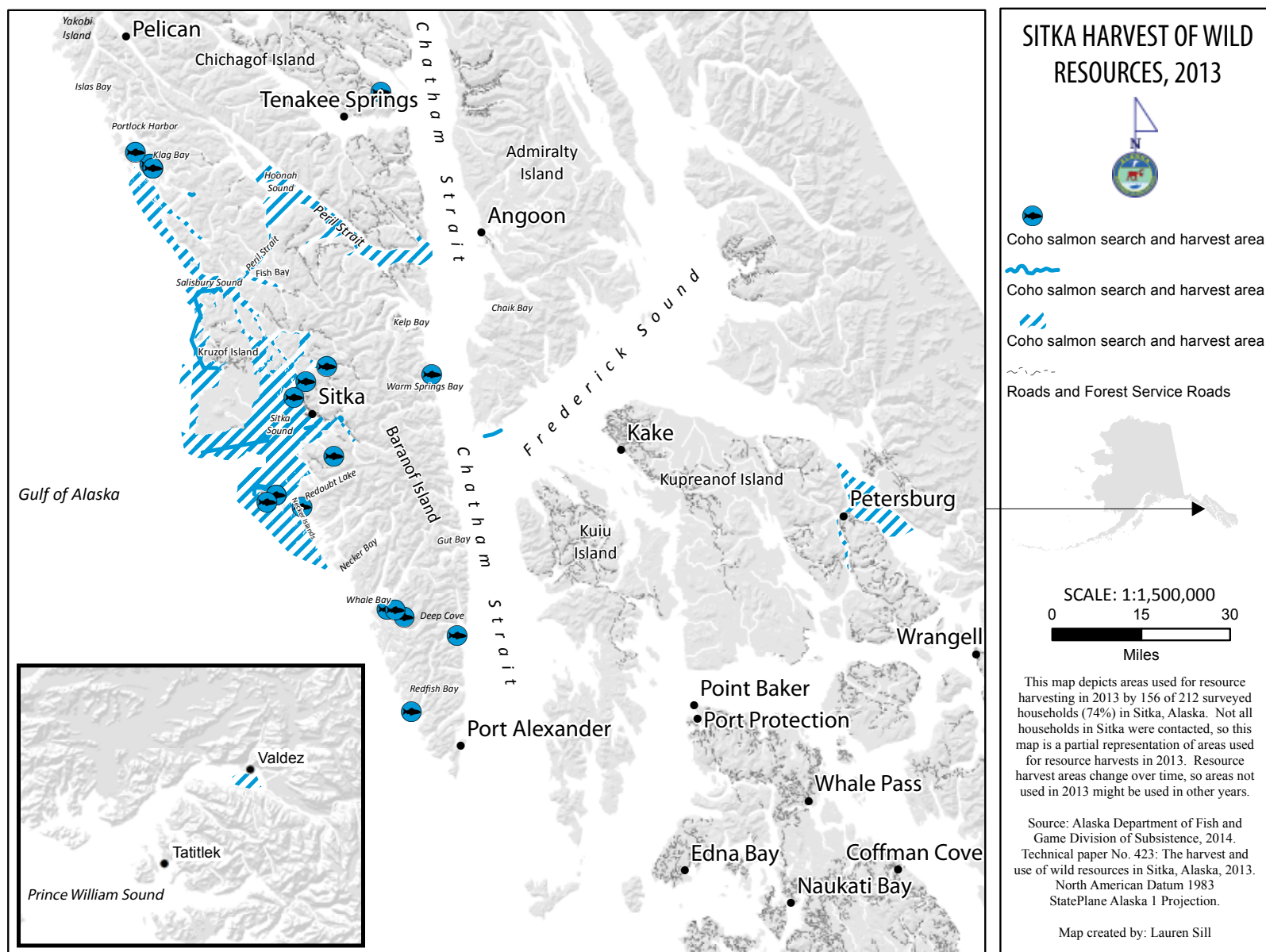


Figure 2-19.—Fishing and harvest locations of coho salmon, Sitka, 2013.

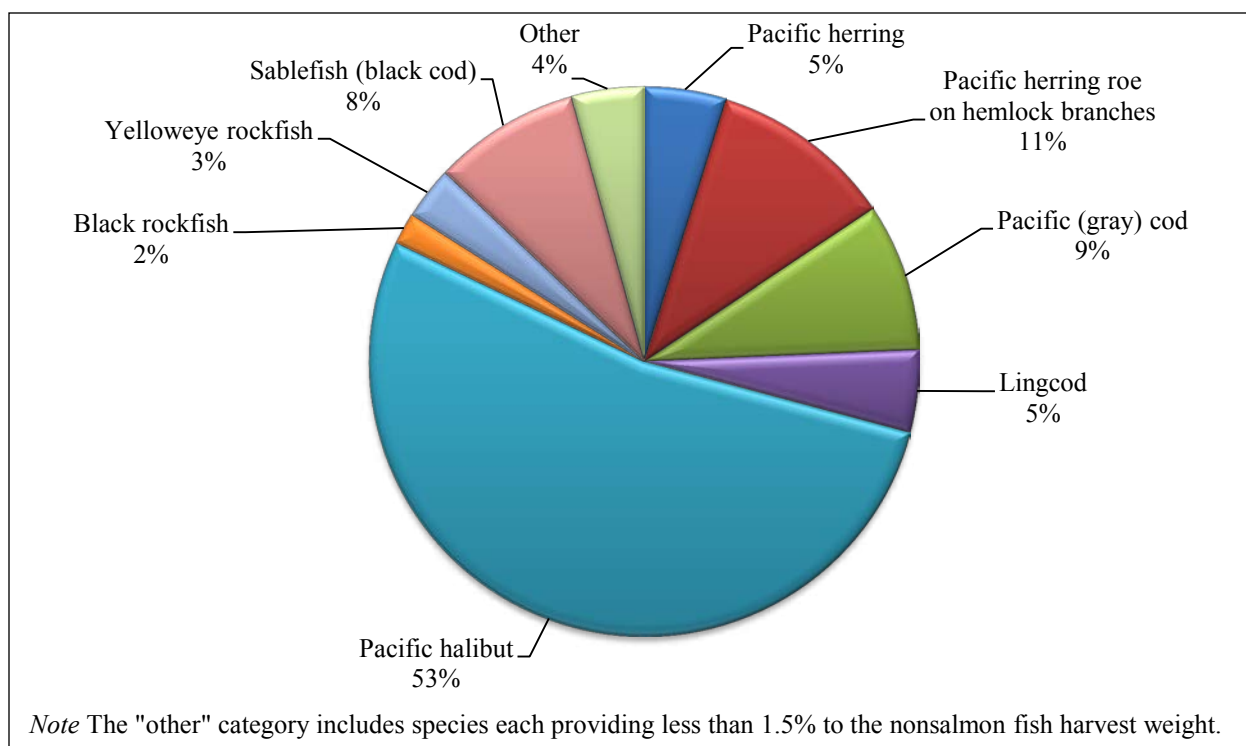


Figure 2-20.—Composition of nonsalmon fish harvest in pounds usable weight, Sitka, 2013.

Nonsalmon Fish

Halibut made up the majority of the nonsalmon fish harvest (53%), followed by herring eggs on branches (11%), Pacific cod (9%), and sablefish (black cod) (8%) (Figure 2-20). The remaining 19% of the harvest consisted of lingcod, herring, yelloweye rockfish, black rockfish, herring eggs harvested on other substrates, and small harvests of at least a dozen other identified fish species. The total community harvest of halibut was 285,317 lb, which is a per capita harvest of 36 lb (Table 2-12). While herring eggs were harvested on a variety of substrates, hemlock branches was the most common; 58,214 lb of herring eggs were harvested on this substrate, a per capita harvest of 7 lb. Approximately 46,994 lb of Pacific cod was harvested in 2013, which is a per capita harvest of 6 lb.

Since the total nonsalmon fish harvest of 538,694 lb was more than the weight of any other resource category, it is not too surprising that more households used nonsalmon fish (91%) than any other resource category (Table 2-12). Most households that attempted to catch nonsalmon fish (55%) were successful (54%). Nonsalmon fish were also widely shared with 43% of households giving and 73% of households receiving nonsalmon fish. As might be expected given the size of the halibut catch, more households (40%) fished for halibut than any other nonsalmon fish; a slightly smaller number (33%) of households successfully caught a halibut. Halibut was also shared; 28% of households shared halibut and 52% received it. Other nonsalmon fish that many households caught included yelloweye rockfish (29% of households), lingcod (21%), and black rockfish (16%). Even though black cod and herring eggs composed a substantial portion of the total harvest, they were not harvested by a large proportion of the community. Herring eggs on branches were harvested by 8% of households and black cod by 5%. Both of these species were used by many households though; 33% of households used herring eggs on branches and 26% used black cod. Both species have high rates of sharing with herring eggs on branches being received by 28% of households and black cod by 21%. Only halibut was received by more households. Approximately 13% and 8% of households gave herring eggs and black cod, respectively.

An estimated 317,398 lb of nonsalmon fish were taken using subsistence gear (mostly longline and skate), 136,217 lb were removed from commercial catches, and 85,079 lb of nonsalmon fish were harvested using rod and reel gear (Table 2-16). Figure 2-21 is a visual representation of the number of nonsalmon fish harvested by gear type. As estimated in pounds of fish, 59% of the nonsalmon fish harvest was caught using subsistence gear, 25% was removed from commercial catches, and 16% was harvested using rod and reel gear (Table 2-17). For 9 resources, subsistence gear (nets, longlines and skates, or other methods) was most commonly used for harvest: Pacific herring, herring eggs on various substrates, Pacific cod, lingcod, black cod, and skates. Herring eggs and black cod were taken almost exclusively by subsistence gear, while lingcod was harvested with rod and reel as well. There were 14 species for which rod and reel was the most commonly used method: smelt, Pacific tomcod, rockfishes (5 species plus unknown), red Irish lord, Dolly Varden, and trouts (3 reported species plus unknown). For most of these species, rod and reel was the predominant harvest type; for rockfish, subsistence skates and removal from commercial catches also made up substantial portions of the harvest. For 3 species, removal from commercial catches was the most commonly used harvest method: 44% of halibut, 100% of sac roe herring, and 100% of flounder. Halibut was also harvested with subsistence longlines or skates (39%) and rod and reel (17%). Under federal regulations, rod and reel is legal gear for subsistence harvesting halibut; the survey did not capture this level of detail, so some of the halibut harvest reported with rod and reel gear was likely taken by eligible individuals with a Subsistence Halibut Registration Certificate (SHARC), and may be better represented as a subsistence harvest. The majority of the harvest with subsistence gear (excluding potential halibut subsistence rod and reel harvests) was of 3 species; halibut (35%), black cod (14%), and herring eggs on branches (18%). Halibut composed the majority of the rod and reel harvest (58%) and of removals from commercial catches (93%).

Sitkans used the waters near to Sitka for most of their nonsalmon fish harvest effort, especially Sitka Sound and Peril Strait. Fishing effort was recorded as far south on Baranof Island as the Necker Islands, all along the coast as far north as Klag Bay. On the inside waters, halibut were fished for in Peril Strait, Chaik Bay, Tenakee Inlet by the community of Tenakee Springs, and near Warm Springs Bay (Figure 2-22). Effort for herring eggs was concentrated in Sitka Sound, particularly around the islands near the community (Figure 2-23). These are areas consistently used each year. Fishing locations for other nonsalmon fish species can be found in Appendix C.

Table 2-16.—Estimated harvest of nonsalmon fish by gear type and resource, Sitka, 2013.

Resource	Unit ^a	Removed from commercial catch		Subsistence/personal use methods											
		Number	Pounds	Gillnet or seine		Longline and skate		Other method		Subsistence/personal use gear, any method		Rod and reel ^b		Any method	
				Number	Pounds	Number	Pounds	Number	Pounds	Number	Pounds	Number	Pounds	Number	Pounds
Nonsalmon fish			136,216.9		1,909.1		223,644.6		91,844.4		317,398.1		85,079.3		538,694.3
Pacific herring	gal	119.1	714.6	270.6	1,623.4	0.0	0.0	3,168.7	19,012.3	3,439.3	20,635.6	753.0	4,518.2	4,311.4	25,868.4
Pacific herring roe/unspecified	gal	0.0	0.0	0.0	0.0	0.0	0.0	1,625.9	6,420.0	1,625.9	6,420.0	0.0	0.0	1,625.9	6,420.0
Pacific herring sac roe	gal	21.7	85.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	21.7	85.6
Pacific herring spawn on kelp	gal	21.7	85.6	0.0	0.0	0.0	0.0	1,064.1	4,201.6	1,064.1	4,201.6	2.5	10.0	1,088.3	4,297.2
Pacific herring roe on hair seaweed	gal	0.0	0.0	0.0	0.0	0.0	0.0	373.4	1,474.2	373.4	1,474.2	0.0	0.0	373.4	1,474.2
Pacific herring roe on hemlock branches	gal	0.0	0.0	17.8	70.4	0.0	0.0	14,517.4	57,322.5	14,535.2	57,392.8	207.9	821.0	14,743.2	58,213.8
Eulachon (hooligan, candlefish)	gal	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Silver smelt	gal	0.0	0.0	0.0	0.0	0.0	0.0	8.9	80.2	8.9	80.2	65.0	585.3	73.9	665.5
Pacific (gray) cod	ind	21.7	69.4	0.0	0.0	14,606.6	46,741.0	0.0	0.0	14,606.6	46,741.0	57.4	183.6	14,685.6	46,994.0
Pacific tomcod	ind	21.7	10.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	104.5	52.3	126.2	63.1
Flounder	ind	21.7	65.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	21.7	65.0
Lingcod	ind	65.0	409.7	0.0	0.0	2,801.2	17,647.4	371.4	2,339.6	3,172.5	19,987.0	887.6	5,591.9	4,125.2	25,988.6
Pacific halibut	lb	126,376.0	126,376.0	0.0	0.0	110,047.1	110,047.1	0.0	0.0	110,047.1	110,047.1	48,894.0	48,894.0	285,317.1	285,317.1
Perch	ind	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Black rockfish	ind	20.8	41.7	0.0	0.0	237.8	475.6	149.6	299.2	387.4	774.8	4,596.5	9,193.1	5,004.8	10,009.5
Yelloweye rockfish	ind	1,725.5	5,176.6	0.0	0.0	1,544.8	4,634.4	59.8	179.5	1,604.6	4,813.9	2,245.7	6,737.2	5,575.9	16,727.8
Quillback rockfish	ind	0.0	0.0	0.0	0.0	49.3	147.9	0.0	0.0	49.3	147.9	195.1	585.3	244.4	733.2
Dusky rockfish	ind	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	65.0	130.1	65.0	130.1
Copper rockfish	ind	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	260.1	780.4	260.1	780.4
Unknown rockfish	ind	314.2	800.6	0.0	0.0	65.0	165.7	0.0	0.0	65.0	165.7	558.0	1,421.7	937.3	2,388.0
Sablefish (black cod)	ind	582.7	2,330.8	0.0	0.0	10,946.4	43,785.5	0.0	0.0	10,946.4	43,785.5	130.1	520.3	11,659.1	46,636.6
Buffalo sculpin	ind	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Red Irish lord	ind	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.9	5.9	5.9	5.9
Shark	ind	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Skates	ind	0.0	0.0	21.7	108.4	0.0	0.0	21.7	108.4	43.4	216.8	21.7	108.4	65.0	325.2
Sole	ind	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Dolly Varden	ind	0.0	0.0	35.6	106.9	0.0	0.0	118.8	356.4	154.5	463.4	1,018.4	3,055.1	1,172.8	3,518.5
Cutthroat trout	ind	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	114.3	171.5	114.3	171.5
Rainbow trout	ind	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	559.8	1,119.6	559.8	1,119.6
Steelhead	ind	5.9	50.5	0.0	0.0	0.0	0.0	5.9	50.5	5.9	50.5	65.0	552.8	76.9	653.8
Unknown trout	ind	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	21.7	41.5	21.7	41.5
Unknown whitefishes	ind	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Source ADF&G Division of Subsistence household surveys, 2014.

Note The summary row that includes incompatible units of measure for harvest number has been left blank.

a. The harvested number of each resource is measured by the unit in which the resource harvest information was collected; the unit of measure is provided for each resource.

b. Under federal regulations, rod and reel is legal gear for subsistence harvests of Pacific halibut taken by residents of eligible rural communities and members of eligible tribes who have a Subsistence Halibut Registration Certificate (SHARC).

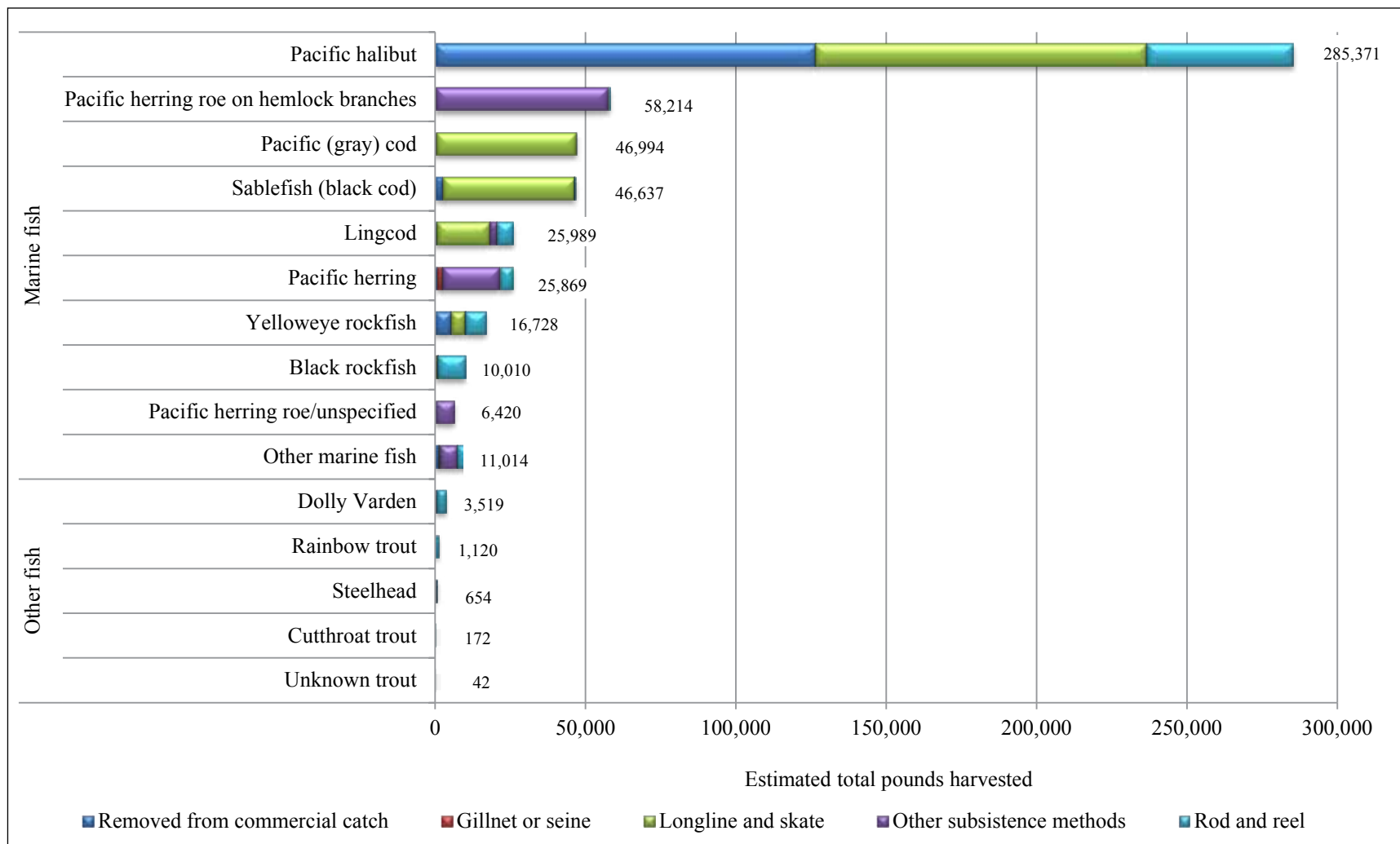


Figure 2-21.—Estimated harvest of nonsalmon fish in pounds usable weight by gear type and resource, Sitka, 2013.

Table 2-17.—Estimated percentages of nonsalmon fish harvested by gear type, resource, and total nonsalmon fish harvest, Sitka, 2013.

Resource	Percentage base	Removed from commercial catch	Subsistence/personal use methods				Rod and reel ^a	Any method
			Gillnet or seine	Longline or skate	Other method	Subsistence/personal use gear, any method		
Nonsalmon fish	Gear type	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
	Resource	25.3%	0.4%	41.5%	17.0%	58.9%	15.8%	100.0%
	Total	25.3%	0.4%	41.5%	17.0%	58.9%	15.8%	100.0%
Pacific herring	Gear type	0.5%	85.0%	0.0%	20.7%	6.5%	5.3%	4.8%
	Resource	2.8%	6.3%	0.0%	73.5%	79.8%	17.5%	100.0%
	Total	0.1%	0.3%	0.0%	3.5%	3.8%	0.8%	4.8%
Pacific herring roe/unspecified	Gear type	0.0%	0.0%	0.0%	7.0%	2.0%	0.0%	1.2%
	Resource	0.0%	0.0%	0.0%	100.0%	100.0%	0.0%	100.0%
	Total	0.0%	0.0%	0.0%	1.2%	1.2%	0.0%	1.2%
Pacific herring sac roe	Gear type	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
	Resource	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%
	Total	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Pacific herring spawn on kelp	Gear type	0.1%	0.0%	0.0%	4.6%	1.3%	0.0%	0.8%
	Resource	2.0%	0.0%	0.0%	97.8%	97.8%	0.2%	100.0%
	Total	0.0%	0.0%	0.0%	0.8%	0.8%	0.0%	0.8%
Pacific herring roe on hair seaweed	Gear type	0.0%	0.0%	0.0%	1.6%	0.5%	0.0%	0.3%
	Resource	0.0%	0.0%	0.0%	100.0%	100.0%	0.0%	100.0%
	Total	0.0%	0.0%	0.0%	0.3%	0.3%	0.0%	0.3%
Pacific herring roe on hemlock branches	Gear type	0.0%	3.7%	0.0%	62.4%	18.1%	1.0%	10.8%
	Resource	0.0%	0.1%	0.0%	98.5%	98.6%	1.4%	100.0%
	Total	0.0%	0.0%	0.0%	10.6%	10.7%	0.2%	10.8%
Eulachon (hooligan, candlefish)	Gear type	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
	Resource	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
	Total	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Silver smelt	Gear type	0.0%	0.0%	0.0%	0.1%	0.0%	0.7%	0.1%
	Resource	0.0%	0.0%	0.0%	12.1%	12.1%	87.9%	100.0%
	Total	0.0%	0.0%	0.0%	0.0%	0.0%	0.1%	0.1%
Pacific (gray) cod	Gear type	0.1%	0.0%	20.9%	0.0%	14.7%	0.2%	8.7%
	Resource	0.1%	0.0%	99.5%	0.0%	99.5%	0.4%	100.0%
	Total	0.0%	0.0%	8.7%	0.0%	8.7%	0.0%	8.7%
Pacific tomcod	Gear type	0.0%	0.0%	0.0%	0.0%	0.0%	0.1%	0.0%
	Resource	17.2%	0.0%	0.0%	0.0%	0.0%	82.8%	100.0%
	Total	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%

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Table 2-17.-Page 2 of 3.

Resource	Percentage base	Removed from commercial catch	Subsistence/personal use methods				Rod and reel ^a	Any method
			Gillnet or seine	Longline or skate	Other method	Subsistence/personal use gear, any method		
Flounder	Gear type	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
	Resource	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%
	Total	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Lingcod	Gear type	0.3%	0.0%	7.9%	2.5%	6.3%	6.6%	4.8%
	Resource	1.6%	0.0%	67.9%	9.0%	76.9%	21.5%	100.0%
	Total	0.1%	0.0%	3.3%	0.4%	3.7%	1.0%	4.8%
Pacific halibut	Gear type	92.8%	0.0%	49.2%	0.0%	34.7%	57.5%	53.0%
	Resource	44.3%	0.0%	38.6%	0.0%	38.6%	17.1%	100.0%
	Total	23.5%	0.0%	20.4%	0.0%	20.4%	9.1%	53.0%
Perch	Gear type	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
	Resource	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
	Total	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Black rockfish	Gear type	0.0%	0.0%	0.2%	0.3%	0.2%	10.8%	1.9%
	Resource	0.4%	0.0%	4.8%	3.0%	7.7%	91.8%	100.0%
	Total	0.0%	0.0%	0.1%	0.1%	0.1%	1.7%	1.9%
Yelloweye rockfish	Gear type	3.8%	0.0%	2.1%	0.2%	1.5%	7.9%	3.1%
	Resource	30.9%	0.0%	27.7%	1.1%	28.8%	40.3%	100.0%
	Total	1.0%	0.0%	0.9%	0.0%	0.9%	1.3%	3.1%
Quillback rockfish	Gear type	0.0%	0.0%	0.1%	0.0%	0.0%	0.7%	0.1%
	Resource	0.0%	0.0%	20.2%	0.0%	20.2%	79.8%	100.0%
	Total	0.0%	0.0%	0.0%	0.0%	0.0%	0.1%	0.1%
Dusky rockfish	Gear type	0.0%	0.0%	0.0%	0.0%	0.0%	0.2%	0.0%
	Resource	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	100.0%
	Total	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Copper rockfish	Gear type	0.0%	0.0%	0.0%	0.0%	0.0%	0.9%	0.1%
	Resource	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	100.0%
	Total	0.0%	0.0%	0.0%	0.0%	0.0%	0.1%	0.1%
Unknown rockfish	Gear type	0.6%	0.0%	0.1%	0.0%	0.1%	1.7%	0.4%
	Resource	33.5%	0.0%	6.9%	0.0%	6.9%	59.5%	100.0%
	Total	0.1%	0.0%	0.0%	0.0%	0.0%	0.3%	0.4%
Sablefish (black cod)	Gear type	1.7%	0.0%	19.6%	0.0%	13.8%	0.6%	8.7%
	Resource	5.0%	0.0%	93.9%	0.0%	93.9%	1.1%	100.0%
	Total	0.4%	0.0%	8.1%	0.0%	8.1%	0.1%	8.7%

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Table 2-17.–Page 3 of 3.

Resource	Percentage base	Removed from commercial catch	Subsistence/personal use methods				Rod and reel ^a	Any method
			Gillnet or seine	Longline or skate	Other method	Subsistence/personal use gear, any method		
Buffalo sculpin	Gear type	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
	Resource	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
	Total	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Red Irish lord	Gear type	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
	Resource	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	100.0%
	Total	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Shark	Gear type	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
	Resource	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
	Total	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Skates	Gear type	0.0%	5.7%	0.0%	0.1%	0.1%	0.1%	0.1%
	Resource	0.0%	33.3%	0.0%	33.3%	66.7%	33.3%	100.0%
	Total	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.1%
Sole	Gear type	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
	Resource	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
	Total	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Dolly Varden	Gear type	0.0%	5.6%	0.0%	0.4%	0.1%	3.6%	0.7%
	Resource	0.0%	3.0%	0.0%	10.1%	13.2%	86.8%	100.0%
	Total	0.0%	0.0%	0.0%	0.1%	0.1%	0.6%	0.7%
Cutthroat trout	Gear type	0.0%	0.0%	0.0%	0.0%	0.0%	0.2%	0.0%
	Resource	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	100.0%
	Total	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Rainbow trout	Gear type	0.0%	0.0%	0.0%	0.0%	0.0%	1.3%	0.2%
	Resource	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	100.0%
	Total	0.0%	0.0%	0.0%	0.0%	0.0%	0.2%	0.2%
Steelhead	Gear type	0.0%	0.0%	0.0%	0.1%	0.0%	0.6%	0.1%
	Resource	7.7%	0.0%	0.0%	7.7%	7.7%	84.6%	100.0%
	Total	0.0%	0.0%	0.0%	0.0%	0.0%	0.1%	0.1%
Unknown trout	Gear type	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
	Resource	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	100.0%
	Total	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Unknown whitefishes	Gear type	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
	Resource	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
	Total	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%

Source ADF&G Division of Subsistence household surveys, 2014.

a. Under federal regulations, rod and reel is legal gear for subsistence harvests of Pacific halibut taken by residents of eligible rural communities and members of eligible tribes who have a Subsistence Halibut Registration Certificate (SHARC).

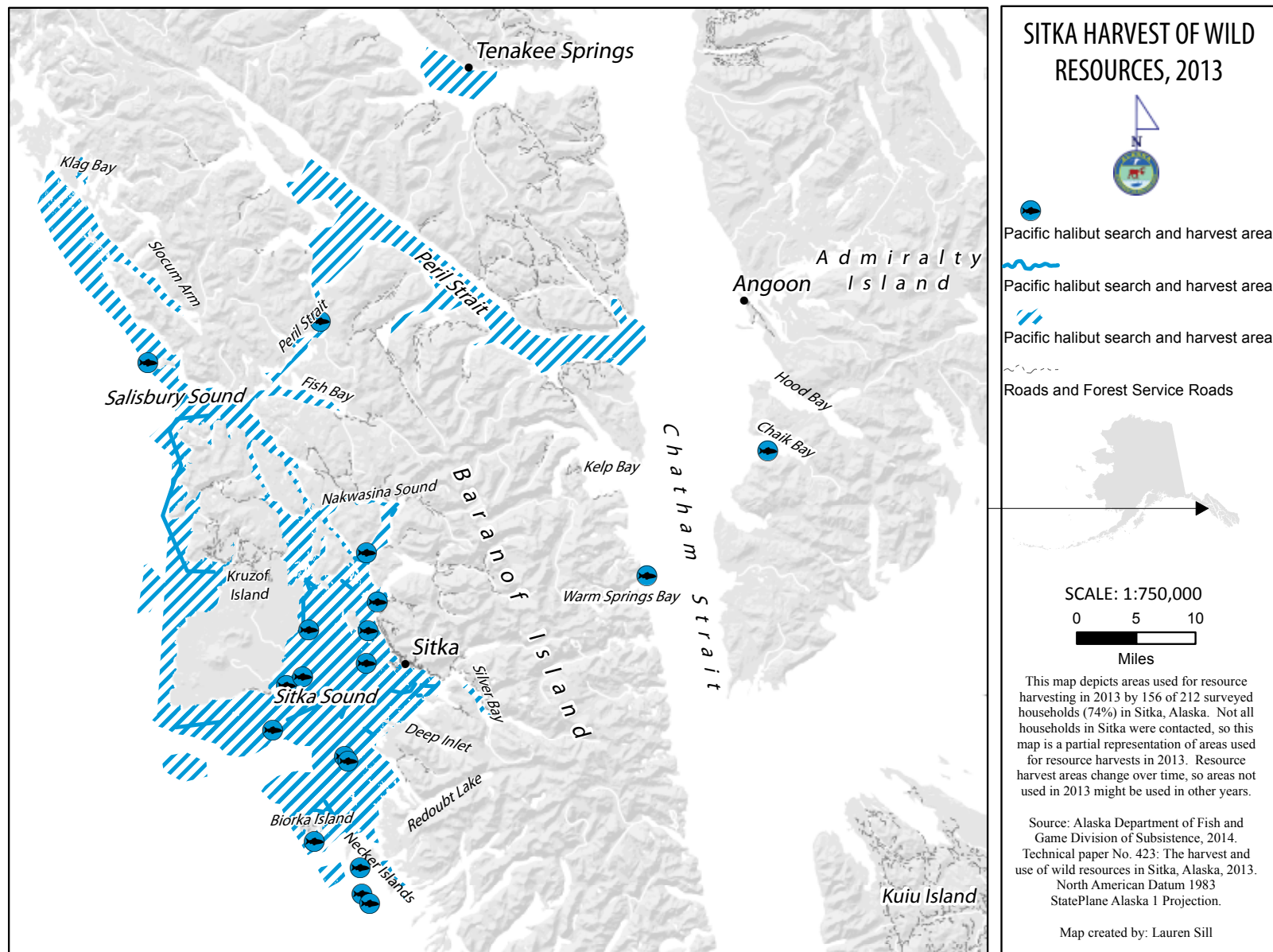


Figure 2-22.—Fishing and harvest locations of Pacific halibut, Sitka, 2013.

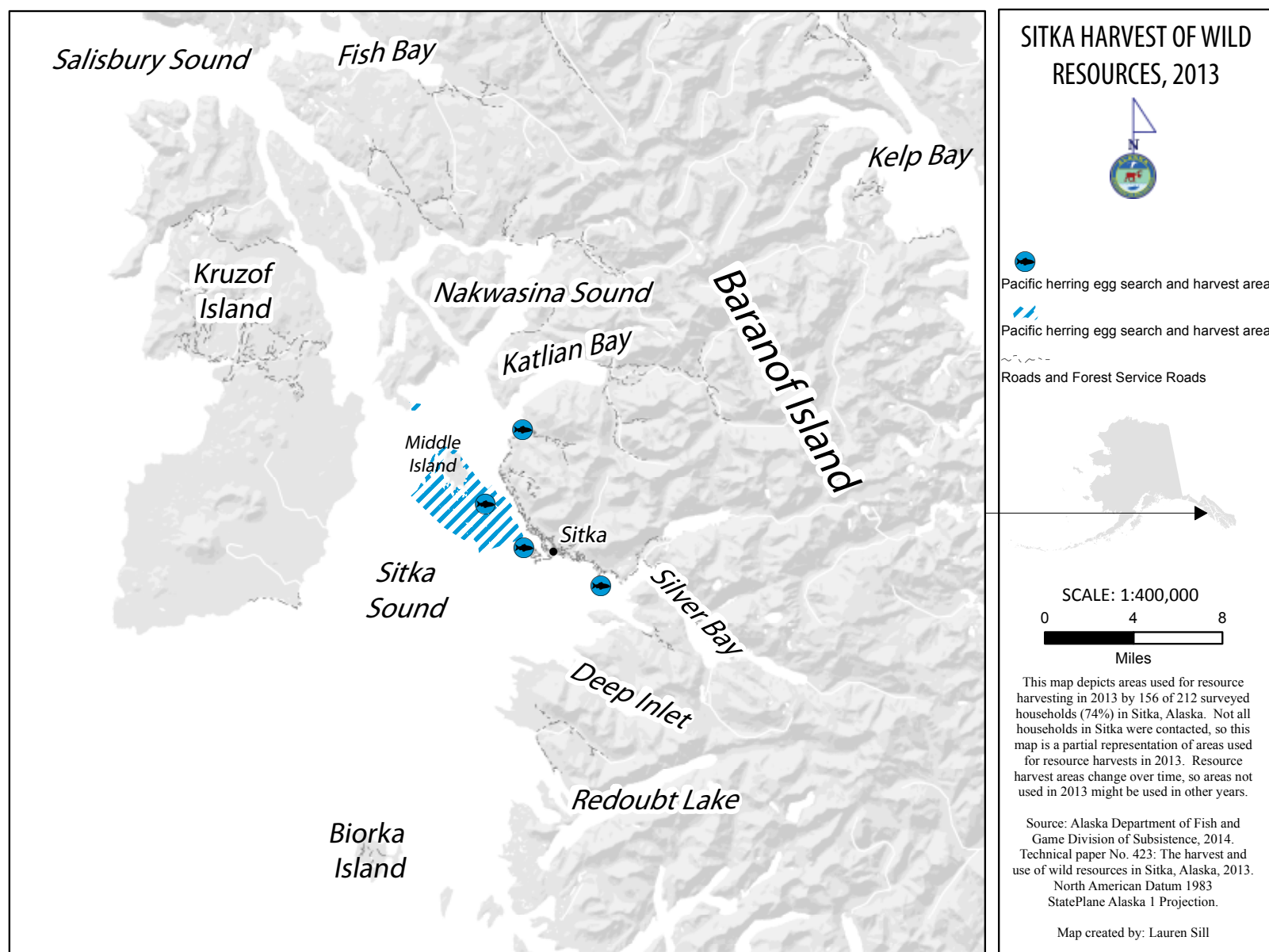


Figure 2-23.—Fishing and harvest locations of Pacific herring roe, Sitka, 2013.

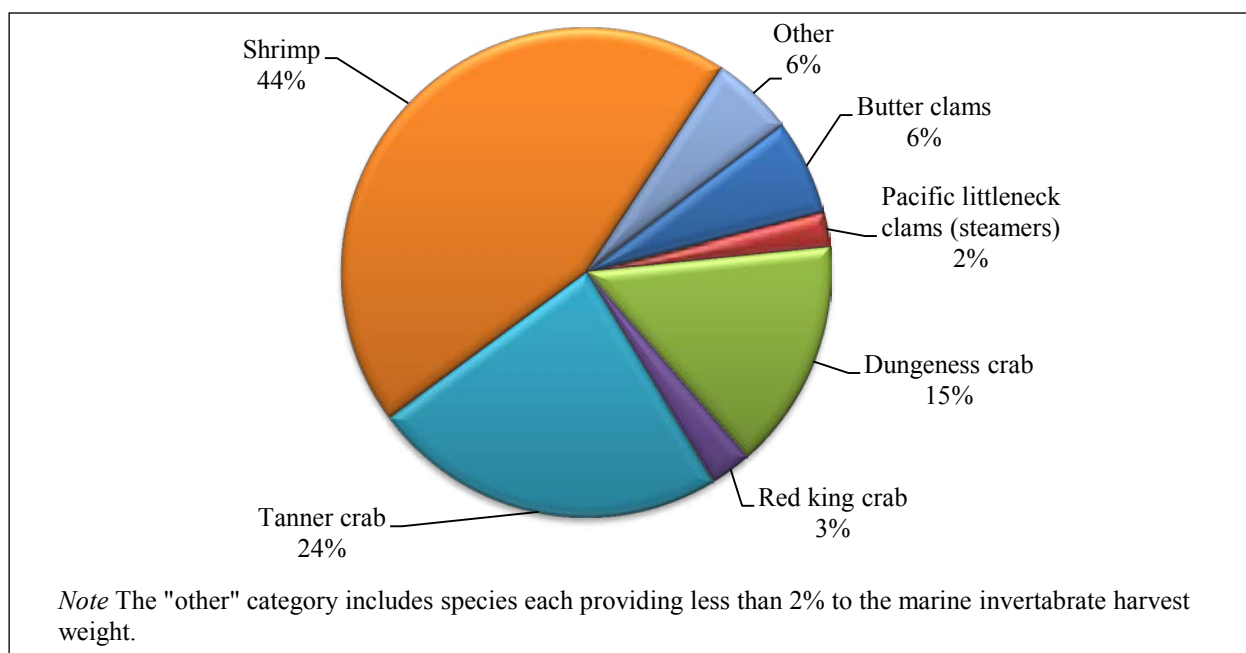


Figure 2-24.—Composition of marine invertebrates harvest in pounds usable weight, Sitka, 2013.

Marine Invertebrates

Many types of marine invertebrates were harvested in Sitka in 2013 (Figure 2-24). A total of 146,387 lb of marine invertebrates were harvested; shrimp were harvested the most (44% of the total), followed by Tanner crab (24%) and Dungeness crab (15%) (Table 2-12; Figure 2-24). The harvest was rounded out with butter clams (6%), red king crab (3%), and Pacific littleneck clams (2%) (Figure 2-24). The remaining 6% of the harvest came from 15 other species, plus unknown clam and cockles species. More than one-half (64%) of Sitka households used marine invertebrates, while 37% of households harvested them (Table 2-13). Marine invertebrates were widely shared with 50% of household receiving some and 32% giving them away. The species that the most households used were Dungeness crab (47% of households used) and shrimp (37%). These 2 species were also harvested and shared by the largest number of households. Dungeness crab was harvested by 24% of households, given by 15% of households and received by 27%. Shrimp was harvested by 18%, given by 17%, and received by 26% of households. Other species with substantial use were butter clams and red king and Tanner crab. King and Tanner crab were received by 9% and 7% of households, respectively, and butter clams were given by 6% of households. No more than 3% of households gave or received any other kind of marine invertebrate.

Harvests of marine invertebrates in 2013 were concentrated along the entirety of the shore of Sitka Sound and the associated inlets and bays through the northern and southern parts of the sound (Figure 2-25). Peril Strait and Hoonah Sound also were locations where there was a lot of fishing effort. Some residents looked for marine invertebrates along Kruzof Island, Salisbury Sound, Islas Bay, and Warm Springs Bay. Further from town, some Sitkans traveled to the communities of Hoonah, Tenakee Springs, Craig, and the northeast side of Admiralty Island to look for and harvest marine invertebrates.

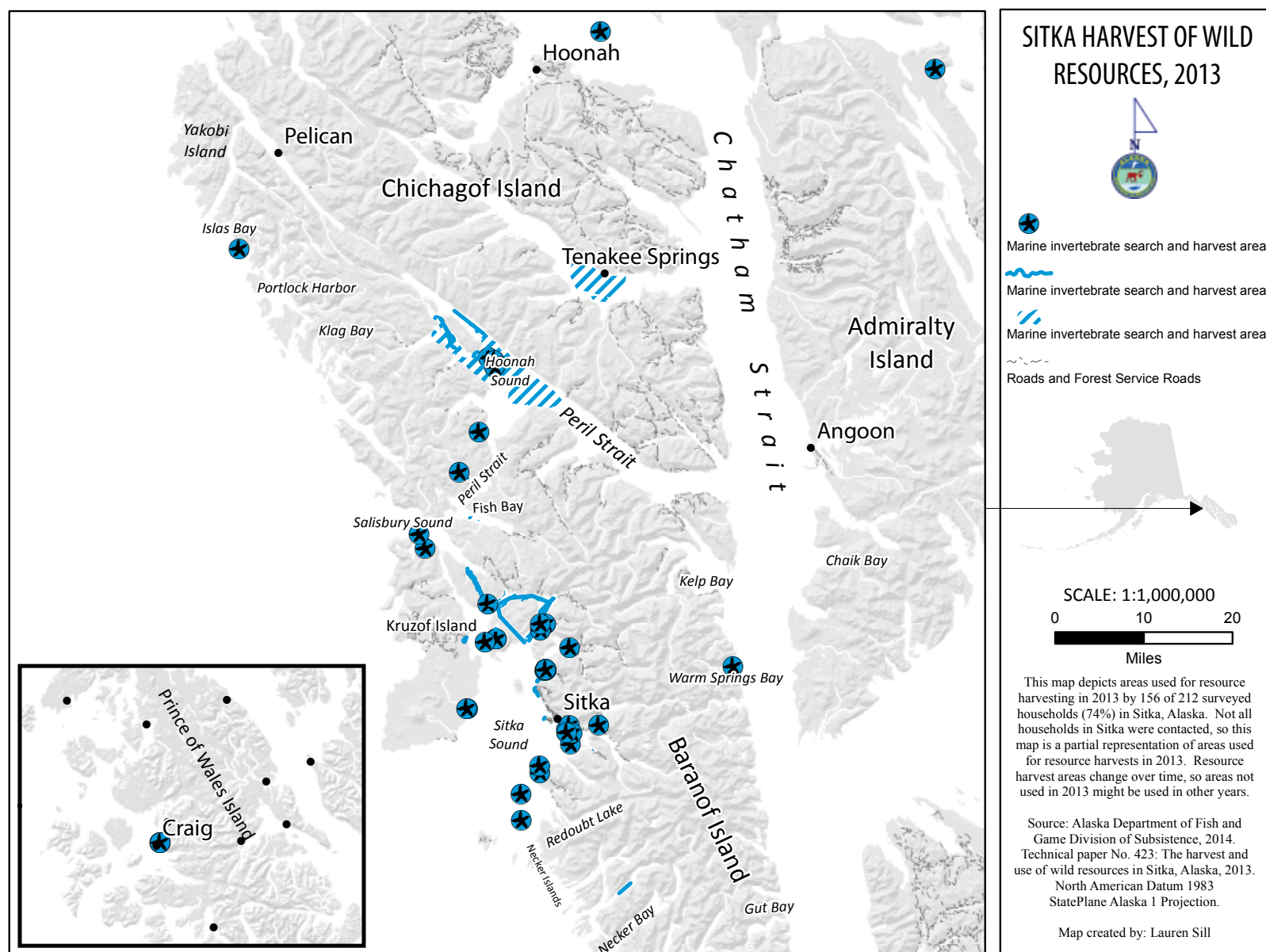


Figure 2-25.—Fishing and harvest locations of marine invertebrates, Sitka, 2013.

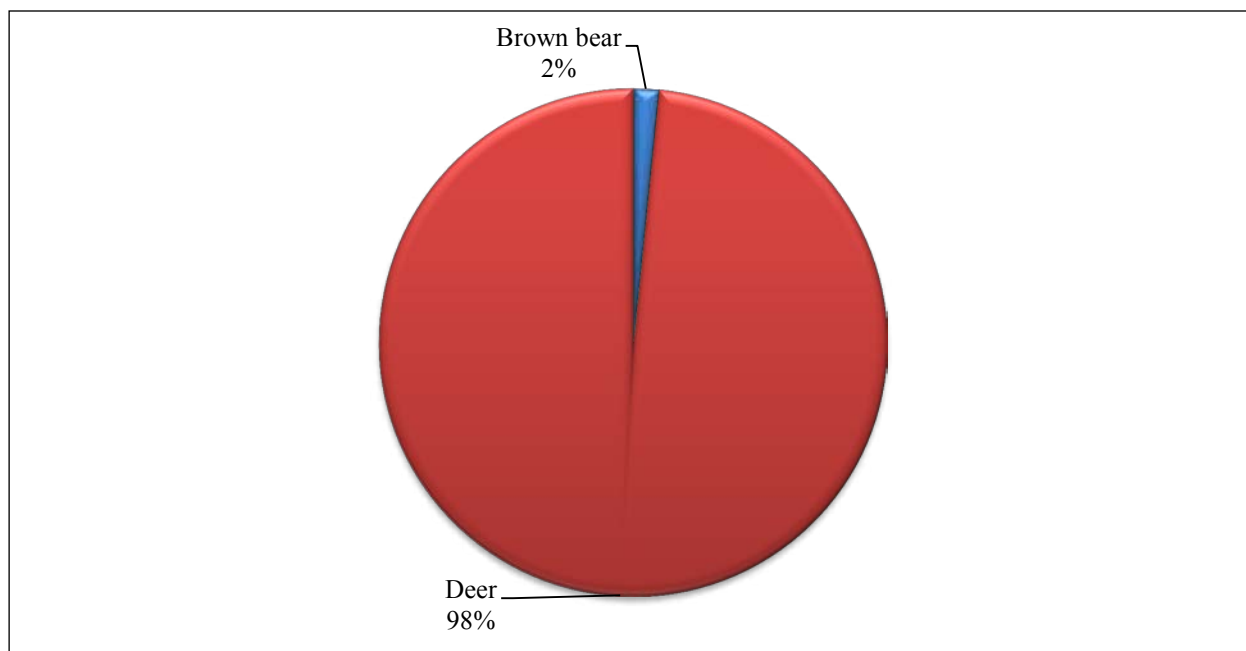


Figure 2-26.—Composition of large land mammal harvest in pounds usable weight, Sitka, 2013.

Large Land Mammals

Deer is the most important large land mammal species harvested and used in Sitka. Deer composed 98% of the overall harvest, with brown bear harvests contributing the remaining 2% (Figure 2-26). A total of 200,052 lb of deer (2,501 animals) were harvested, which is a per capita harvest of 25 lb (Table 2-12). For brown bears, 3,252 lb (22 individuals) were harvested, an average of less than 1 lb per capita. Deer were harvested from August to January; almost one-half of the deer were harvested in November, followed by December (Table 2-18). Lesser amounts of deer were harvested in October, August, and September, with the fewest harvested in January. Almost 70% of the harvested deer were male. Deer of both sexes were harvested in every month except August when only bucks were taken. In every other month, more than one-half the deer harvested were males. Looking at the brown bear harvest, all the bears were taken in May and they were all female.

Of all large land mammals, deer was used by the most households (56%) (Table 2-12). It was also harvested and shared by the most households. Unlike most species harvested, there is a substantial difference between the percentage of households that tried to harvest a deer (37%) and the percentage of households that successfully did so (26%). Approximately 21% of households gave away deer meat and 36% of households received some. The only other species harvested, brown bear, was harvested by 0.7% of households; all households that attempted to harvest were successful. No households in Sitka gave away bear meat, but 0.2% of households received some. Some households unsuccessfully attempted to harvest other large game: moose (2% of households), mountain goats (0.7%), and black bears (0.7%). All of these species were used, however, as were caribou, elk, and Dall sheep. Other than deer, only moose was used by more than 3% of households; 12% of households used moose. Caribou, mountain goats, and moose were also given away by Sitka households, even though none were harvested.

Deer were hunted along the western shore of Baranof Island from Redoubt Lake in the south to Portlock Harbor in the north, especially in all the bays and inlets found within Sitka Sound (Figure 2-27). The waterways of Peril Strait and Hoonah Sound were also well traversed in the search for deer. A much smaller area was used for other large animal hunting. Brown bear hunting locations were reported in a small area near Silver Bay. Since black bears and moose are not found on Baranof Island, residents traveled off island to look for those species. Maps for hunting areas for species in addition to deer can be found in Appendix C.

Table 2-18.—Estimated large land mammal harvests by month and sex, Sitka, 2013.

Resource	Estimated harvest by month													Total
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Unk	
All large land mammals	75.2	0.0	0.0	0.0	21.7	0.0	0.0	195.1	128.4	252.6	1,211.8	619.7	17.8	2,522.3
Black bear	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Black bear, male	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Black bear, female	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Black bear, unknown sex	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Brown bear	0.0	0.0	0.0	0.0	21.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	21.7
Brown bear, male	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Brown bear, female	0.0	0.0	0.0	0.0	21.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	21.7
Brown bear, unknown sex	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Caribou	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Caribou, male	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Caribou, female	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Caribou, unknown sex	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Deer	75.2	0.0	0.0	0.0	0.0	0.0	0.0	195.1	128.4	252.6	1,211.8	619.7	17.8	2,500.6
Deer, male	52.4	0.0	0.0	0.0	0.0	0.0	0.0	195.1	94.7	163.6	887.7	337.9	0.0	1,731.5
Deer, female	22.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	33.6	82.9	317.5	281.1	11.9	749.5
Deer, unknown sex	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	6.1	6.7	0.8	5.9	19.7
Elk	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Elk, male	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Elk, female	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Elk, unknown sex	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Mountain goat	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Mountain goat, male	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Mountain goat, female	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Mountain goat, unknown sex	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Moose	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Moose, bull	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Moose, cow	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Moose, unknown sex	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Dall sheep	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Dall sheep, male	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Dall sheep, female	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Dall sheep, unknown sex	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Source ADF&G Division of Subsistence household surveys, 2014.

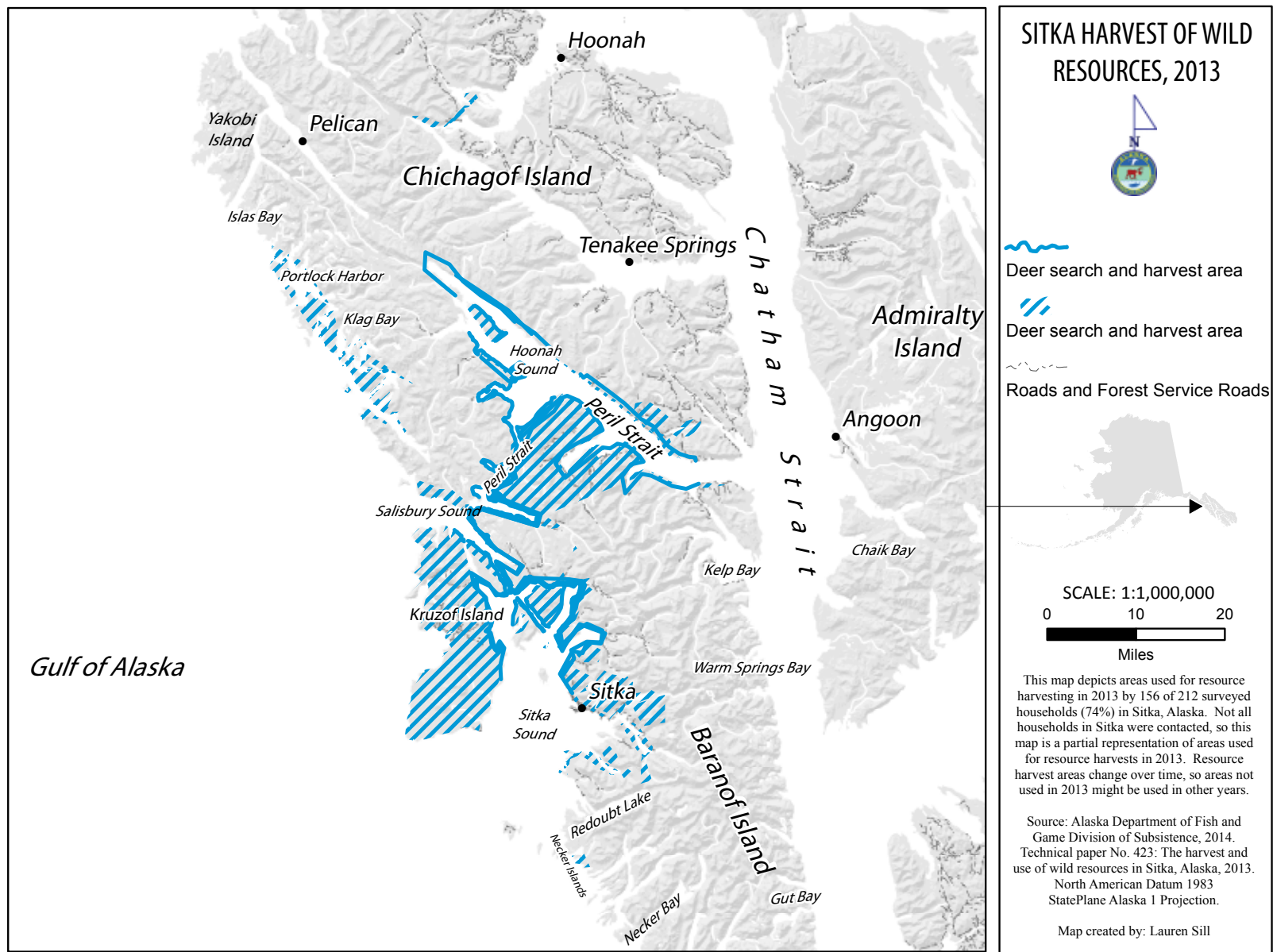


Figure 2-27.—Hunting locations of deer, Sitka, 2013.

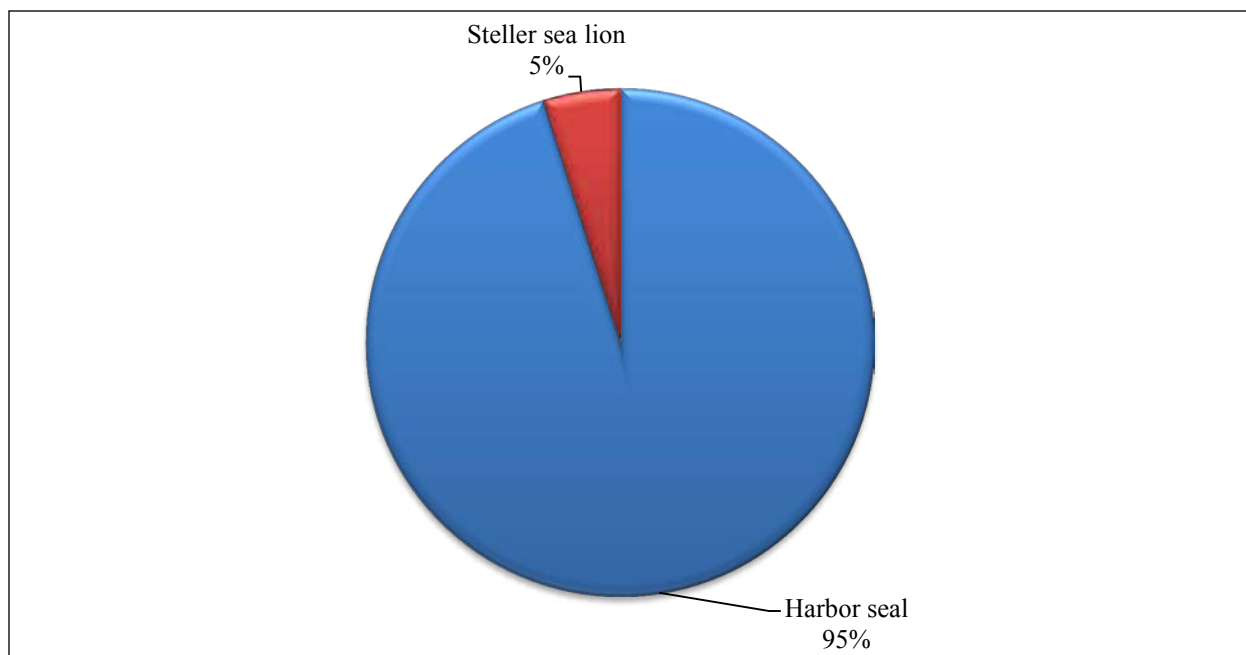


Figure 2-28.—Composition of marine mammal harvest in pounds usable weight, Sitka, 2013.

Marine Mammals

The edible marine mammal harvest in Sitka was dominated by harbor seal (95%), with some Steller sea lion (5%) (Figure 2-28). The estimated harvest consisted of 274 harbor seals (23,036 lb; 3 lb per capita) and 6 sea lions (1,188 lb; less than 1 lb per capita), as well as 468 sea otters, which do not count toward the edible harvest weight (Table 2-12). Marine mammals were taken during every month of the year, although there was a high incidence of “unknown month” reported (Table 2-19). Of the reported months, the most harbor seals were taken in April (22 seals; unknown sex) and November (18 seals; 6 males and 12 females). All sea lions were harvested in January, and all were male. Most sea otters were harvested in May (48 animals, unknown sex).

Marine mammals are not widely used among Sitka households. Harvests of marine mammals are restricted to Alaska Natives and use of marine mammals is higher among Alaska Native households, which compose roughly 25% of the Sitka households (Table 2-2). Overall, 11% of households used any kind of marine mammal, but harbor seal was used most (7%) of all the species (Table 2-12). Sea otters were also used by 3% of households, while sea lions, whales, and unknown seal resources (usually seal oil) were used by less than 1% of households. Most of the households that attempted to harvest a marine mammal were successful. Harbor seals were shared by the most households (8%) followed by sea otters (1%); no more than 1% of households shared any other type of marine mammal. Harbor seals were also received by the most households (2%); no more than 0.5% of households received other kinds of marine mammals.

Seals and sea otters were hunted in similar locations (Figure 2-29; Figure 2-30). These marine mammals were hunted in Sitka Sound, north through Peril Strait, and in the inlets and bays of Sitka Sound such as Nakwasina Sound and Katlian Bay. No search areas for sea lions were recorded.

Table 2-19.—Estimated marine mammal harvests by month and sex, Sitka, 2013.

Resource	Estimated harvest by month													Total
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Unk	
All marine mammals	23.8	11.9	5.9	21.7	50.5	3.0	14.9	5.9	17.8	5.9	17.8	17.8	551.2	748.2
Fur seal	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Fur seal, male	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Fur seal, female	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Fur seal, unknown sex	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Harbor seal	11.9	11.9	5.9	21.7	3.0	3.0	3.0	0.0	5.9	5.9	17.8	11.9	172.3	274.2
Harbor seal, male	0.0	5.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.9	0.0	148.5	160.4
Harbor seal, female	11.9	5.9	5.9	0.0	0.0	0.0	0.0	0.0	5.9	5.9	11.9	11.9	23.8	83.2
Harbor seal, unknown sex	0.0	0.0	0.0	21.7	3.0	3.0	3.0	0.0	0.0	0.0	0.0	0.0	0.0	30.7
Unknown seal	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sea otter	5.9	0.0	0.0	0.0	47.5	0.0	11.9	5.9	11.9	0.0	0.0	5.9	378.9	468.0
Sea otter, male	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	47.5	47.5
Sea otter, female	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	297.0	297.0
Sea otter, unknown sex	5.9	0.0	0.0	0.0	47.5	0.0	11.9	5.9	11.9	0.0	0.0	5.9	2,457.3	2,546.4
Steller sea lion	5.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.9
Steller sea lion, male	5.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.9
Steller sea lion, female	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Steller sea lion, unknown sex	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Unknown whale	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Source ADF&G Division of Subsistence household surveys, 2014.

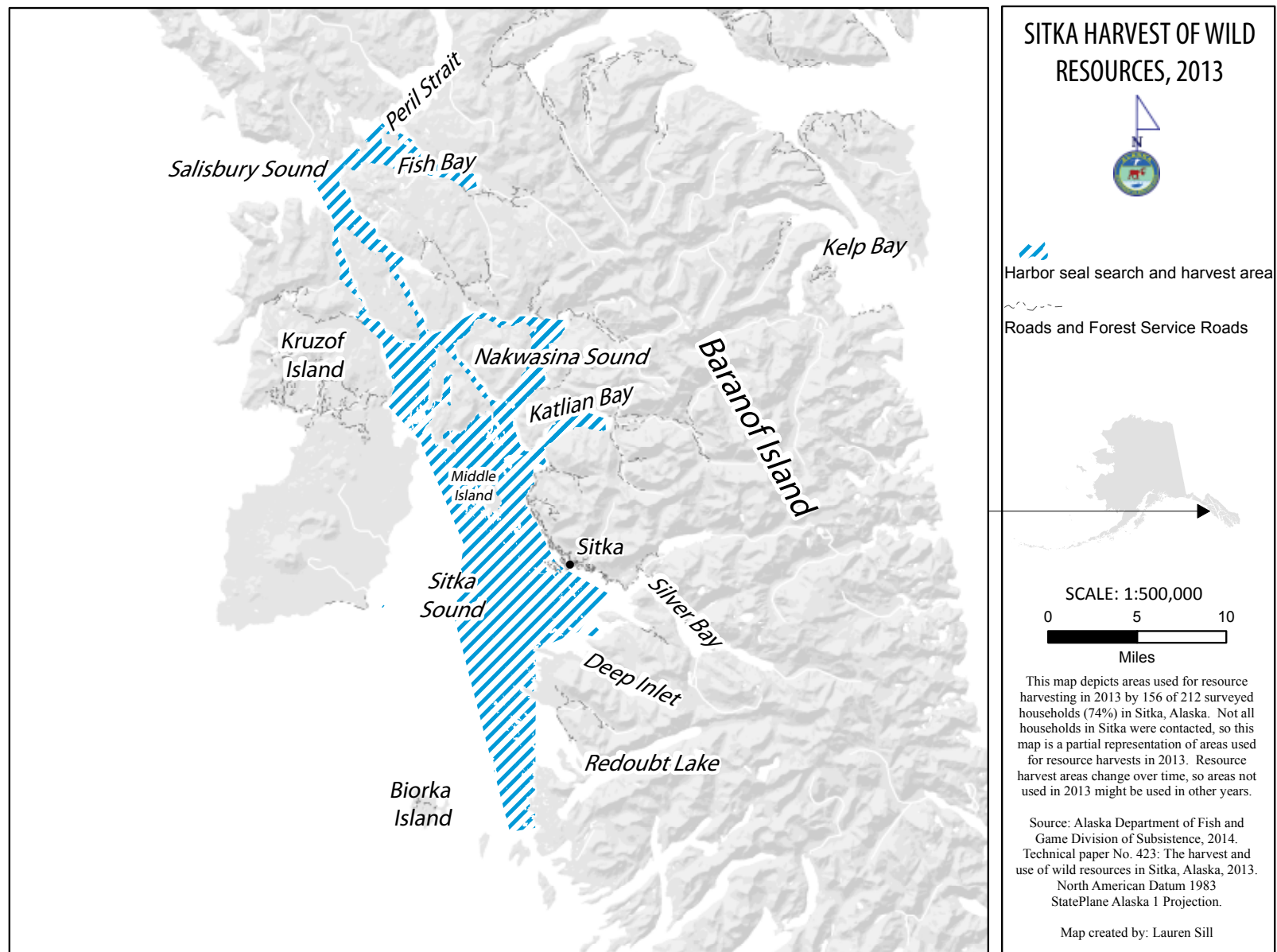


Figure 2-29.—Hunting locations of harbor seals, Sitka, 2013.

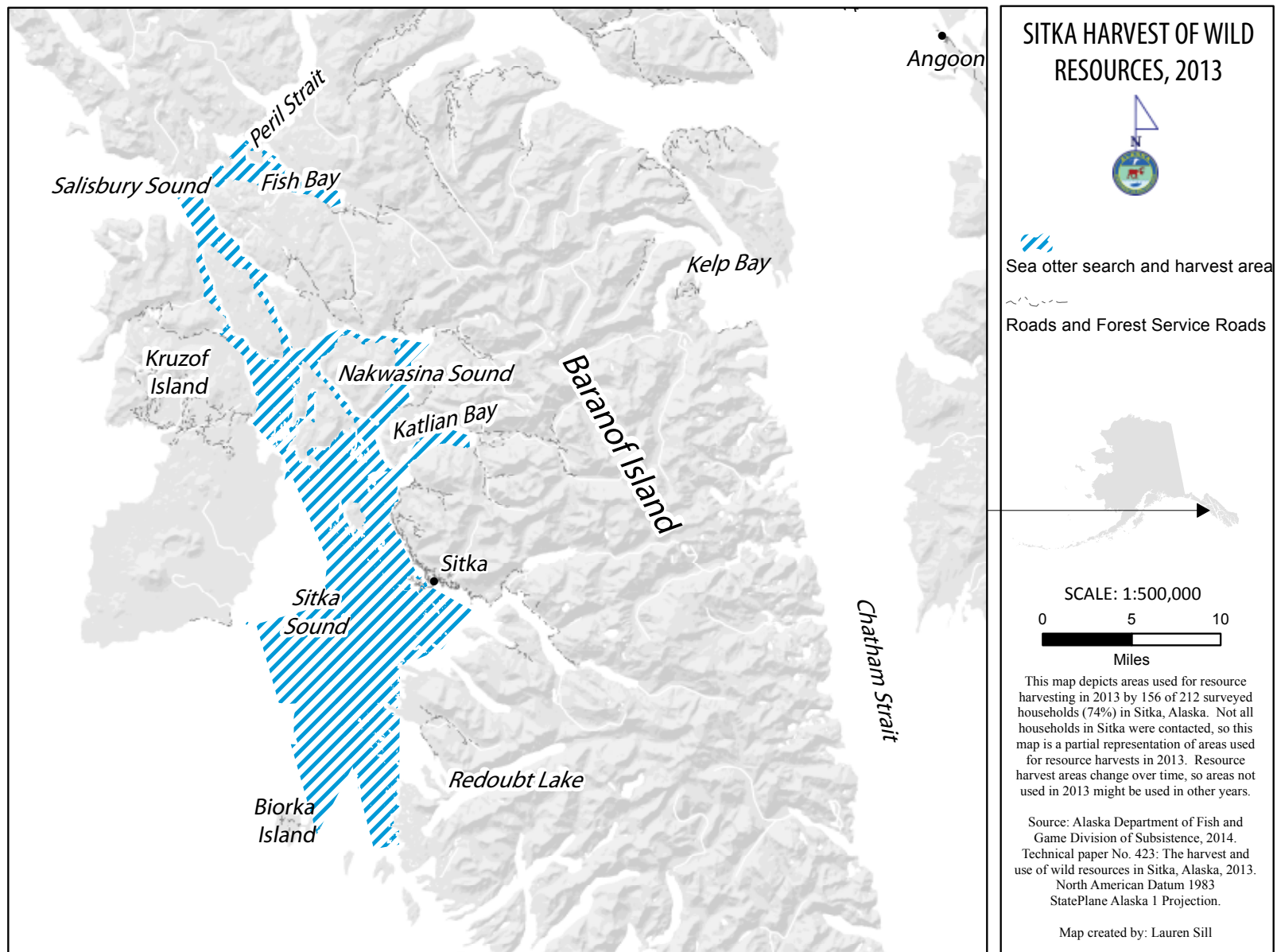


Figure 2-30.—Hunting locations of sea otters, Sitka, 2013.

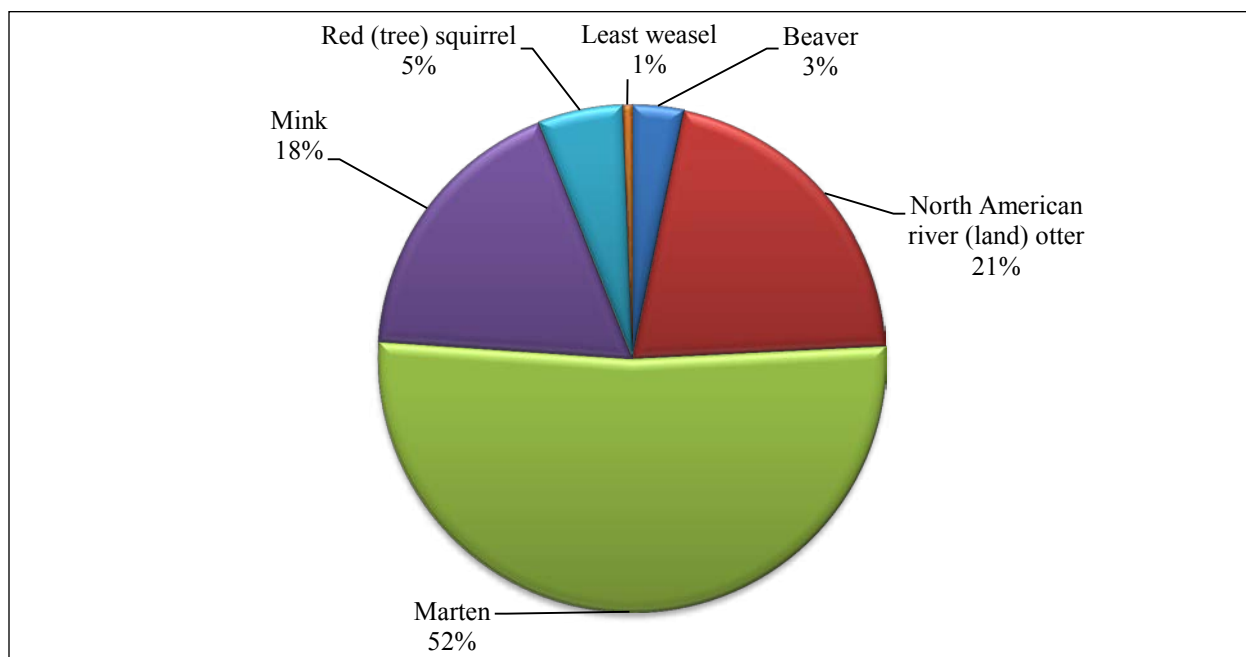


Figure 2-31.—Composition of small land mammal/furbearer harvest by individual animals harvested, Sitka, 2013.

Small Land Mammals/Furbearers

The small land mammals/furbearer category harvest comprised 6 species: marten (52%), North American river (land) otter (21%), mink (18%), red squirrel (5%), beaver (3%), and weasel (1%) (Figure 2-31). Of these species, only beaver and red squirrel were harvested for their meat; all other species are given an edible conversion factor of zero (0) in Table 2-12. There were 217 red squirrels (108 lb) and 132 beavers (949 lb) harvested. Small mammals were harvested during the winter months, especially December (Table 2-20). Beaver, land otter, and mink were also harvested in January, and beaver was harvested in April as well. Few households use or harvest small land mammals. Overall, 4% of households used any species, 4% harvested (though 5% attempted to harvest), and 2% gave while 1% received (Table 2-12). By species, marten was used (2%) and harvested (2%) by the most households.

Small land mammal harvests occurred along the road system in Sitka, along the shorelines of Peril Strait and the western shore of Kuiu Island (Figure 2-32).

Table 2-20.—Estimated small land mammal/furbearer harvests by month, Sitka, 2013.

Resource	Estimated harvest by month													Total
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Unk	
All small land mammals	162.2	0.0	0.0	65.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3,580.3	216.8	4,024.3
Beaver	67.1	0.0	0.0	65.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	132.2
Coyote	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Red fox	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Snowshoe hare	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
North American river (land) otter	41.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	800.3	0.0	841.9
Lynx	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Marmot	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Marten	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2,087.7	0.0	2,087.7
Mink	53.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	668.5	0.0	722.0
Muskrat	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Porcupine	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Red (tree) squirrel	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	216.8	216.8
Weasel	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	23.8	0.0	23.8
Gray wolf	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Wolverine	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Source ADF&G Division of Subsistence household surveys, 2014.

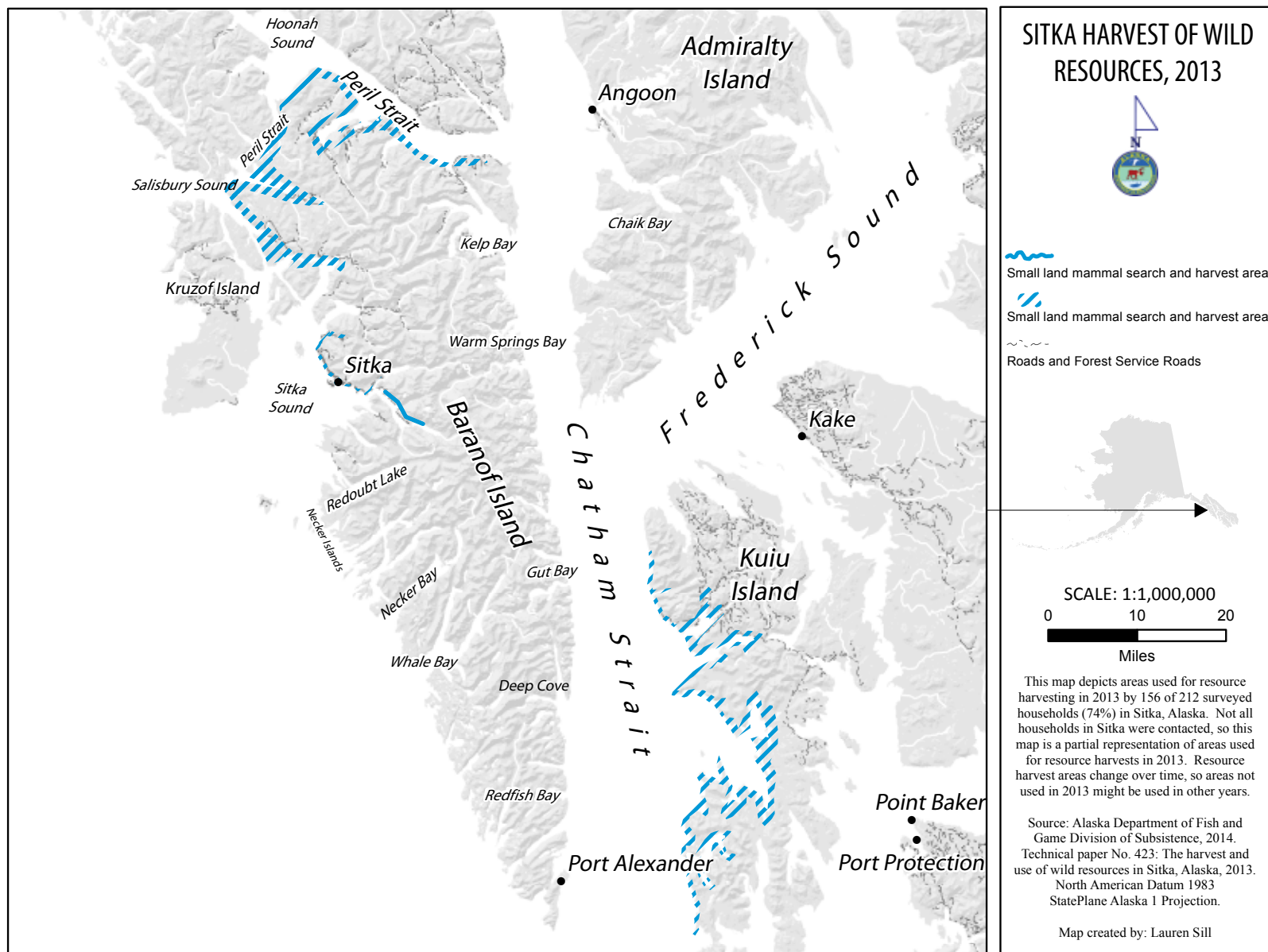


Figure 2-32.—Hunting and trapping locations of small land mammals/furbearers, Sitka, 2013.

Birds and Eggs

Several species of birds composed the 3,695-lb birds and eggs harvest in Sitka: mallard (34%; 1,275 lb), Canada goose (16%; 593 lb), American wigeon (14%; 530 lb), northern pintail (11%; 390 lb), ptarmigan (9%; 347 lb), teal (8%; 278 lb), and brant (6%; 208 lb) (Figure 2-33; Table 2-12). Guillemots, unknown ducks, and grouse round out the remaining 2% of the harvest. No bird eggs were collected or used in Sitka in 2013. The per capita harvest for every bird species was less than 1 lb. In comparison, by number of birds harvested, the harvest totaled 1,275 mallards, 534 teals, 404 wigeons, 390 pintails, and 347 ptarmigan; for each of the remaining harvested bird resources, there were fewer than 200 birds harvested. The majority of birds were taken during the fall season (Table 2-21). Brant and ptarmigan were harvested only in the fall and guillemots were only taken in the winter. Birds and eggs were used by about 10% of Sitka households and harvested by about 9% (Table 2-12). There was not much sharing of birds; about 2% of households gave or received these resources. More households used and harvested mallard than any other species, followed by teal.

Waterfowl were harvested along Peril Strait and Fish Bay, as well as a few other locations in Sitka Sound and on Kruzof Island (Figure 2-34). Sitkans also harvested waterfowl along Icy Strait and in the Mendenhall Wetlands near Juneau, as well as out by the community of Cold Bay in the Aleutian Islands. Upland game birds were harvested from fewer locations, none of which were near Sitka; upland birds were harvested from around the communities of Cold Bay and Tanana (Appendix C).

Vegetation

A total of 94,405 lb (12 lb per capita) of vegetation was harvested; 78% of the harvest, by weight, was berries, followed by seaweeds (16%), plants and greens (11%), and mushrooms (1%) (Figure 2-35). Salmonberries composed the largest harvest of vegetation (27,210 lb; 4 lb per capita), followed by huckleberries (25,038 lb; 3 lb per capita), and blueberries (15,226 lb; 2 lb per capita) (Table 2-12). Among the plants and greens category, wild rhubarb was the most harvested (1,084 lb), followed by beach asparagus (765 lb), and Hudson's Bay (Labrador) tea (650 lb). Mushroom harvest information was not collected at the species level; the harvest totaled 1,313 lb. For seaweeds, black seaweed (8,215 lb) and bull kelp (4,667 lb) accounted for the majority of the harvest. Approximately 1,721 cords of wood were harvested as well, but wood is not given an edible conversion factor in Table 2-12 since it is mostly harvested for home heating purposes.

Vegetation was used by 84% of households and harvested by 80% (Table 2-12). Sharing was also common, with 41% of households giving and receiving vegetation. Berries were used and harvested by the greatest percentage of households. Apart from berries, black seaweed, beach asparagus, and mushrooms were used by the most households; no other individual species was used by more than 10% of households. Blueberries and huckleberries were the most shared species of vegetation, with 23% of households giving both species and 14% receiving blueberries and 11% receiving huckleberries. Salmonberries were also shared, with about 18% of households giving or receiving. Outside of berries, black seaweed was the most shared species of vegetation; 13% of households received black seaweed and 5% gave.

Harvest of vegetation was centered on the Sitka area, both along the road system and the shoreline. Berries were harvested along the road system of Sitka and the surrounding islands, as well as several locations in southern Sitka Sound (Figure 2-36). Hayward Strait, in northern Sitka Sound was also used, as was Klag Bay and Kasnyku Bay. Some residents traveled to Tenakee Springs and further north around Hoonah, Gustavus, and Haines, as well as south to the road system of Prince of Wales Island for their berry harvest effort. Greens (including mushrooms) were harvested from a smaller geographic area; mostly greens were harvested along the road system of Sitka, but also along some of the island shorelines elsewhere in Sitka Sound (Figure 2-37). Some harvest was additionally recorded near the communities of Haines and Wrangell. Similar to the greens harvesting areas, firewood harvests were concentrated along the road system of Sitka, with some harvest along the shores of Kruzof, Krestof, and Halleck islands, Deep Inlet, West Crawfish Inlet, and Kasnyku Bay (Figure 2-38). Firewood was also harvested around Craig. Finally, seaweed was harvested along the Sitka road system, on the shores of Middle Island, southern Sitka Sound, Salisbury Sound, and off of Biorka Island (Figure 2-39).

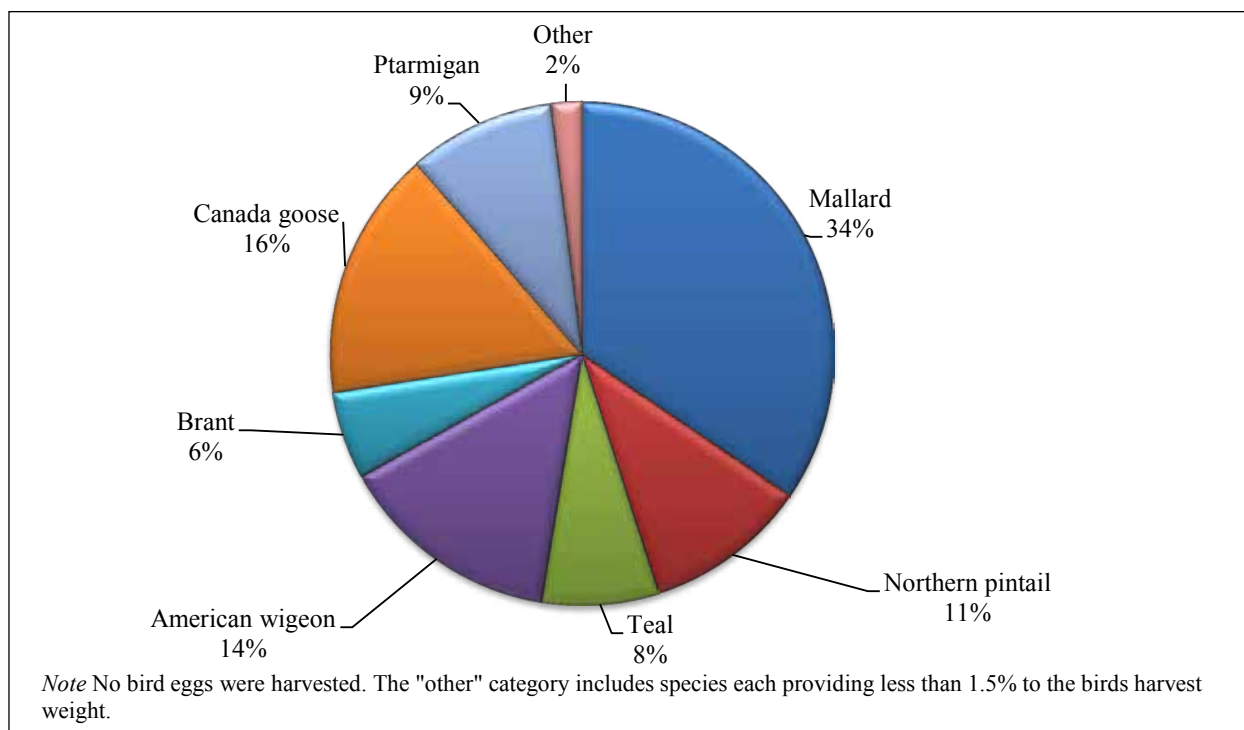


Figure 2-33.—Composition of bird and bird egg harvest in pounds usable weight, Sitka, 2013.

Table 2-21.—Estimated bird harvests by season, Sitka, 2013.

Resource	Estimated harvest by season					Total
	Spring	Summer	Fall	Winter	Season unknown	
All birds	0.0	0.0	3,163.5	209.1	0.0	3,372.6
Goldeneye	0.0	0.0	0.0	0.0	0.0	0.0
Mallard	0.0	0.0	1,127.3	147.9	0.0	1,275.2
Long-tailed duck	0.0	0.0	0.0	0.0	0.0	0.0
Northern pintail	0.0	0.0	390.2	0.0	0.0	390.2
Scaup	0.0	0.0	0.0	0.0	0.0	0.0
Teal	0.0	0.0	516.4	17.8	0.0	534.3
American wigeon	0.0	0.0	404.2	0.0	0.0	404.2
Unknown ducks	0.0	0.0	21.7	0.0	0.0	21.7
Brant	0.0	0.0	173.4	0.0	0.0	173.4
Canada goose	0.0	0.0	173.4	0.0	0.0	173.4
White-fronted goose	0.0	0.0	0.0	0.0	0.0	0.0
Unknown geese	0.0	0.0	0.0	0.0	0.0	0.0
Swans	0.0	0.0	0.0	0.0	0.0	0.0
Sandhill crane	0.0	0.0	0.0	0.0	0.0	0.0
Black oystercatcher	0.0	0.0	0.0	0.0	0.0	0.0
Unknown shorebirds – small	0.0	0.0	0.0	0.0	0.0	0.0
Unknown shorebirds – large	0.0	0.0	0.0	0.0	0.0	0.0
Guillemot	0.0	0.0	0.0	43.4	0.0	43.4
Unknown loon	0.0	0.0	0.0	0.0	0.0	0.0
Unknown seabirds	0.0	0.0	0.0	0.0	0.0	0.0
Grouse	0.0	0.0	10.0	0.0	0.0	10.0
Ptarmigan	0.0	0.0	346.9	0.0	0.0	346.9

Source ADF&G Division of Subsistence household surveys, 2014.

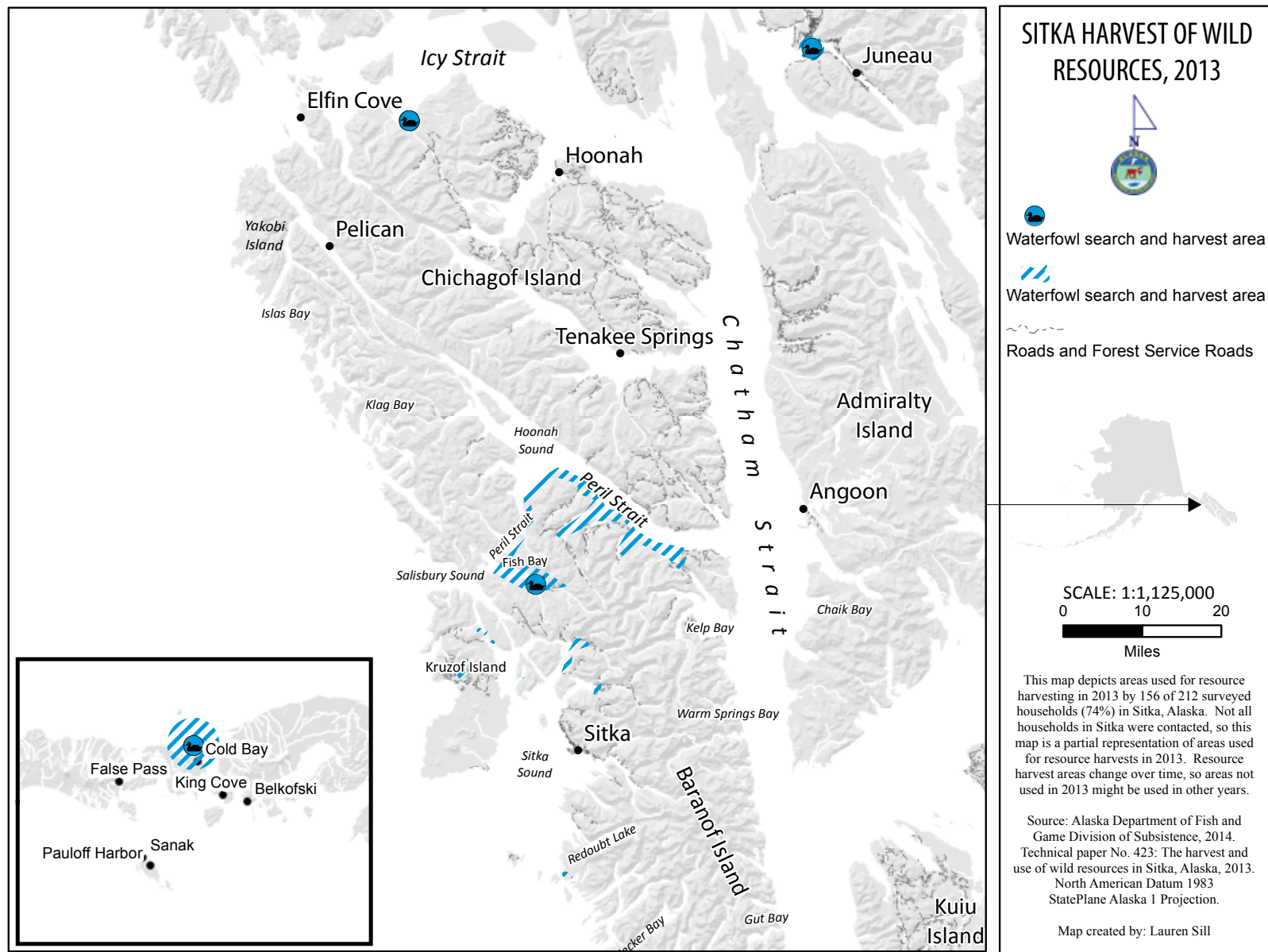


Figure 2-34.—Hunting and harvest locations of migratory waterfowl, Sitka, 2013.

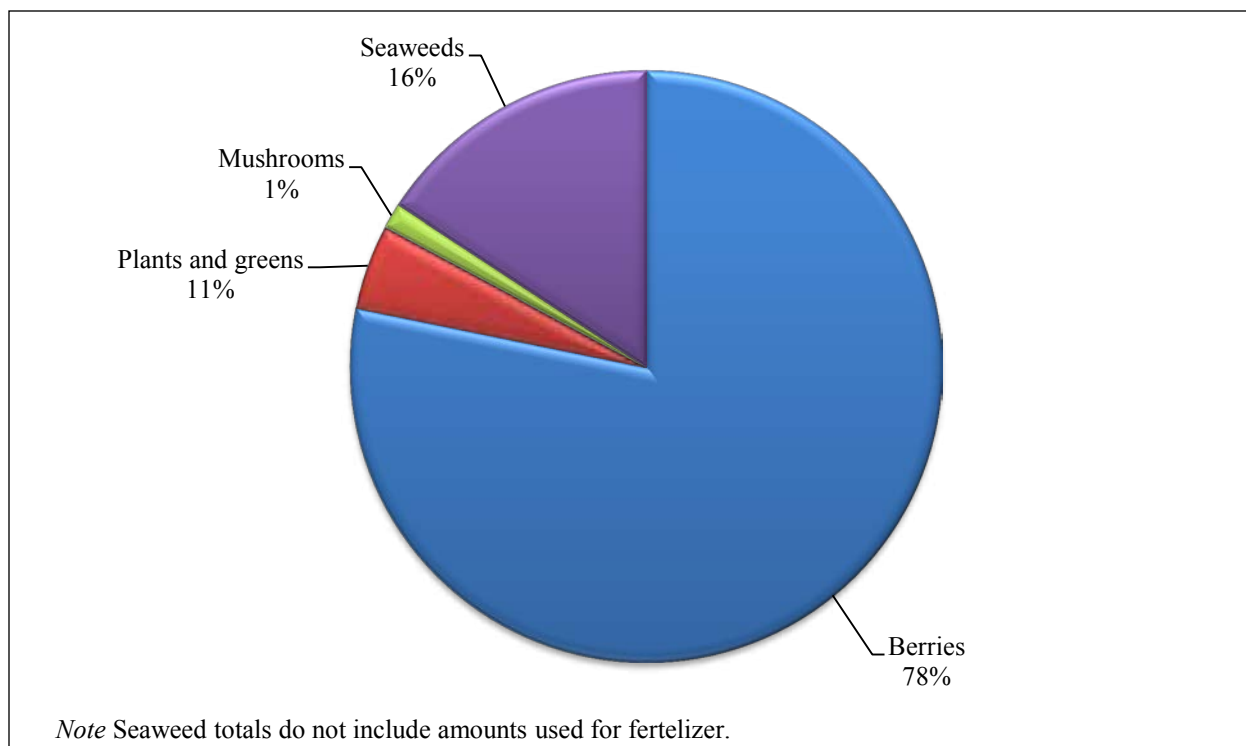


Figure 2-35.—Composition of vegetation harvest by type and pounds usable weight, Sitka, 2013.

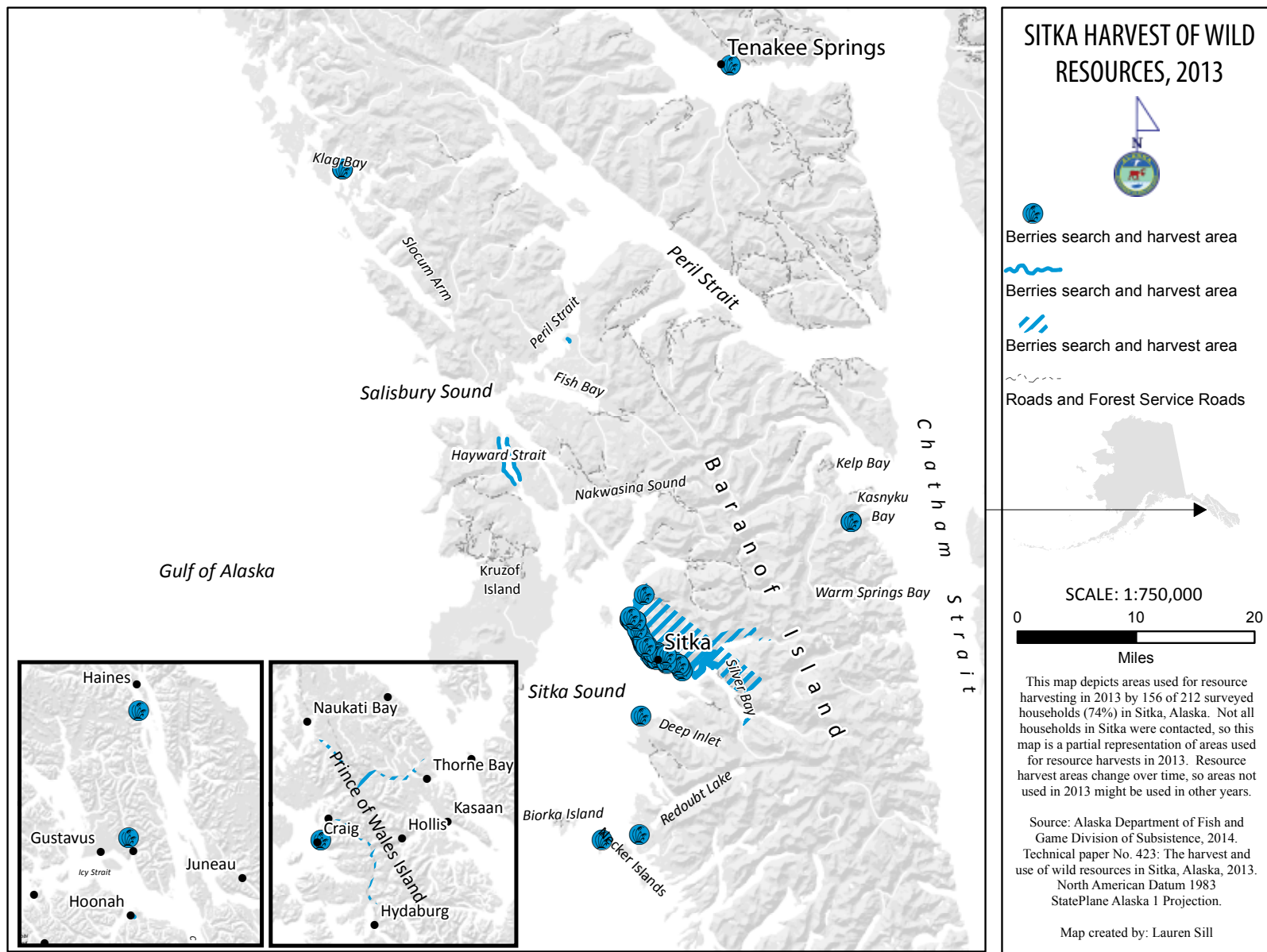


Figure 2-36.—Gathering and harvest locations of berries, Sitka, 2013.

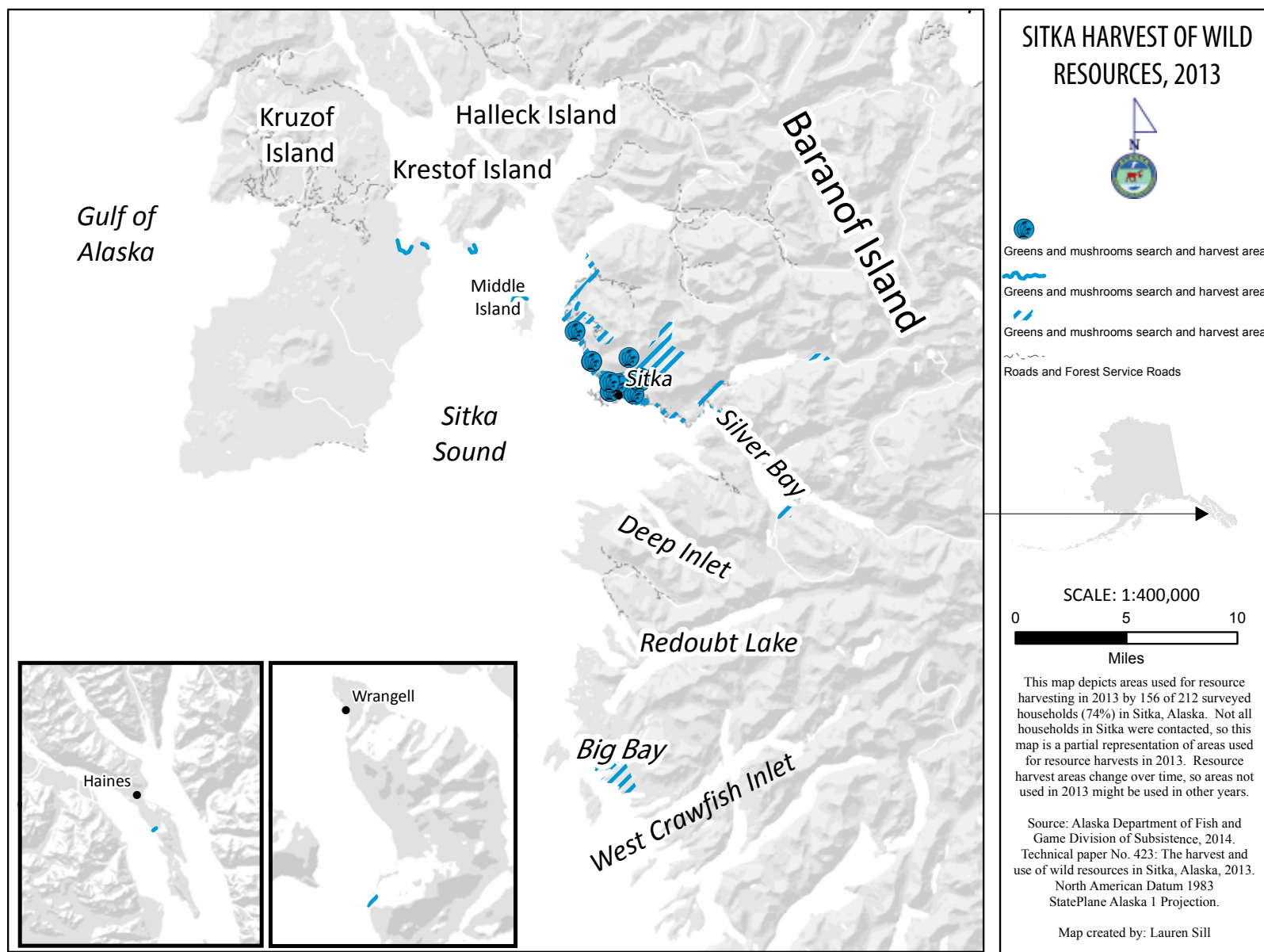


Figure 2-37.—Gathering and harvest locations of plants and mushrooms, Sitka, 2013.

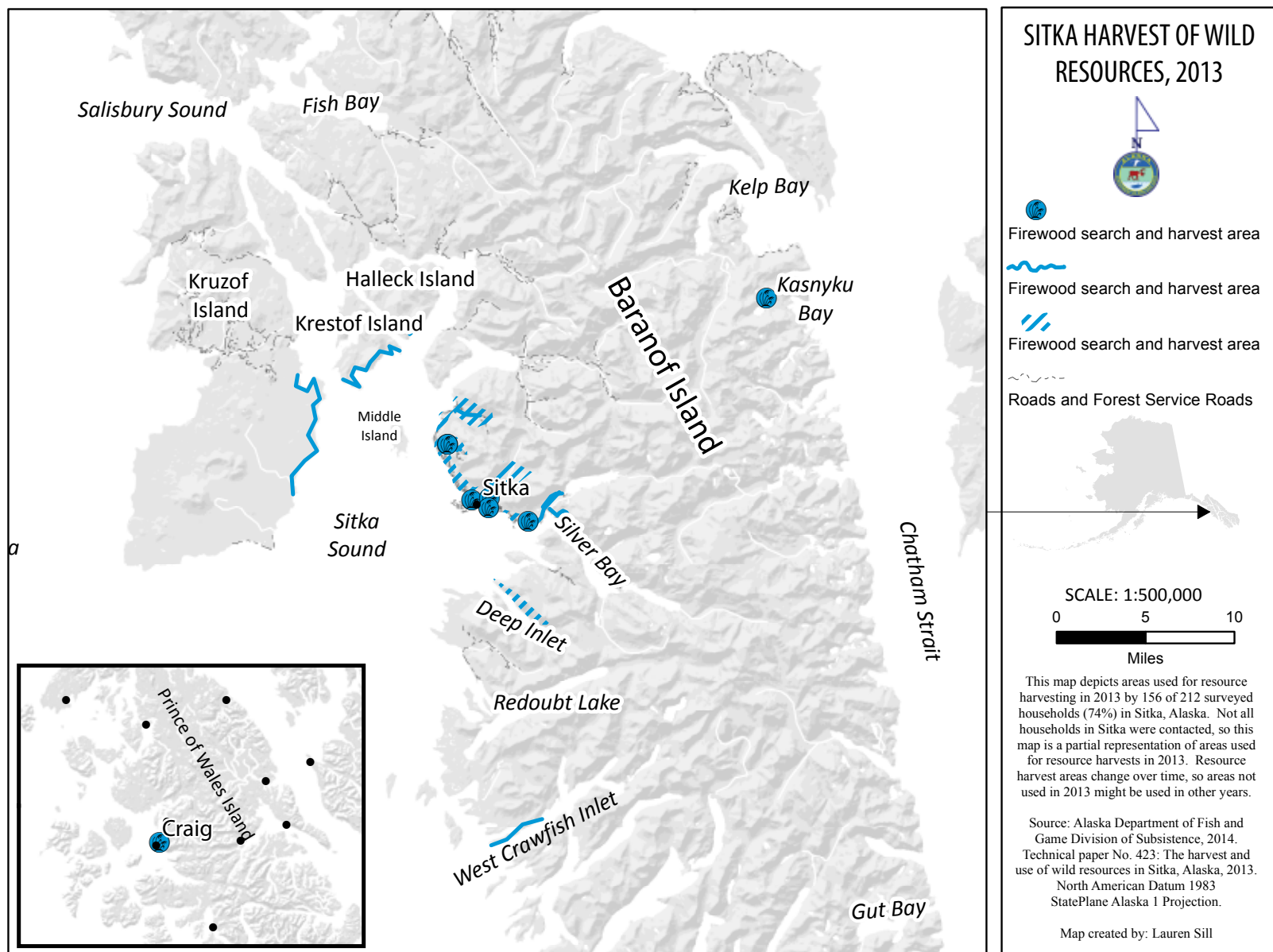


Figure 2-38.—Gathering and harvest locations of firewood, Sitka, 2013.

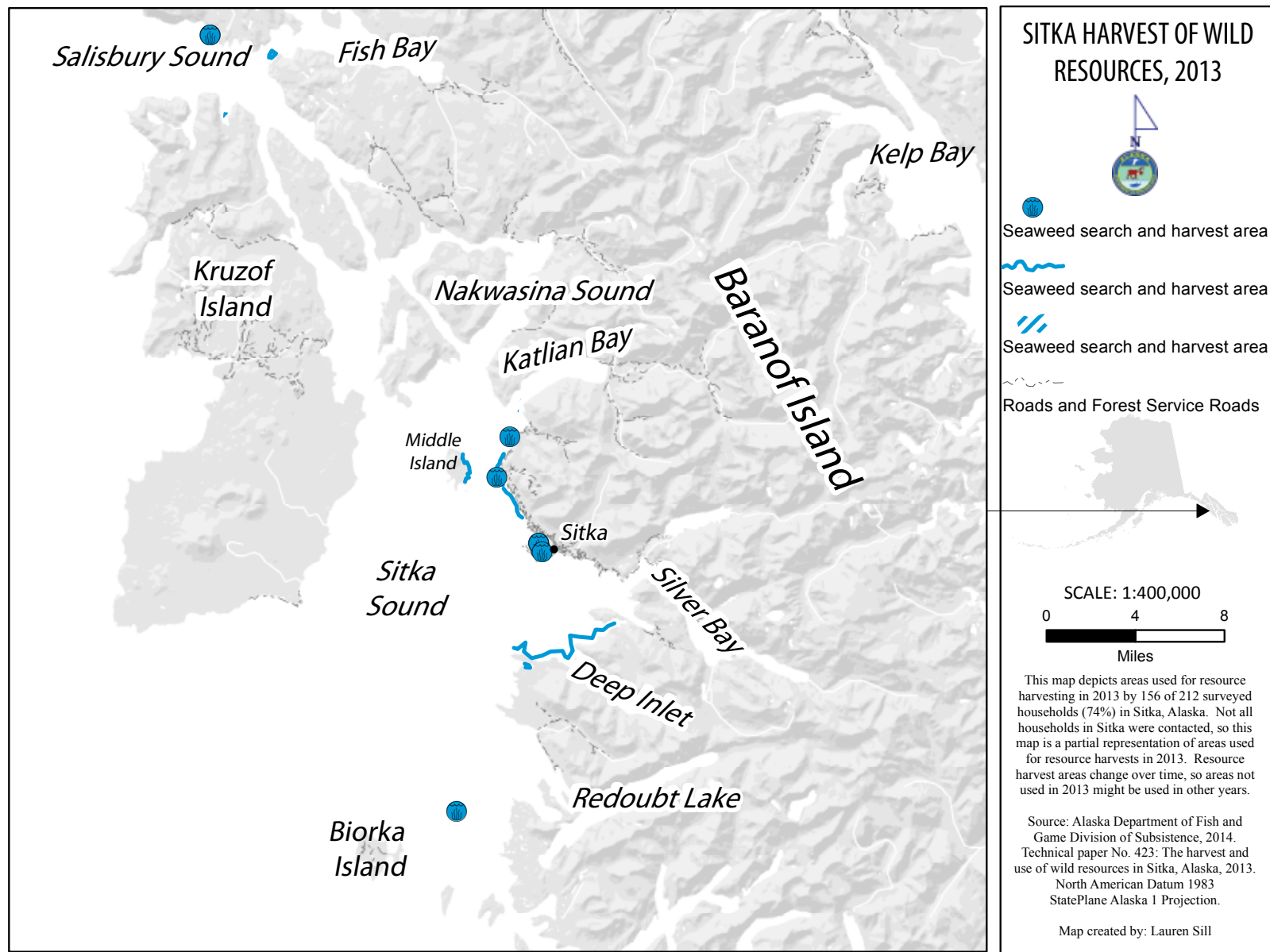


Figure 2-39.—Gathering and harvest locations of seaweed, Sitka, 2013.

COMPARING HARVESTS AND USES IN 2013 WITH PREVIOUS YEARS

Harvest Assessments

Researchers asked respondents to assess their own harvests in 2 ways: whether they got more, less, or about the same amount of 9 resource categories in 2013 as in the past 5 years, and whether they got “enough” of each of the 9 resource categories. Households also were asked to provide reasons if their use was different or if they were unable to get enough of a resource. If they did not get enough of a resource, they were asked to evaluate the severity of the impact to their household as a result of not getting enough. They were further asked whether they did anything differently (such as supplement with store-bought food or switch to a different subsistence resource) because they did not get enough. Additionally, some of these harvest assessment questions were asked about specific kinds of resources from the nonsalmon fish and vegetation categories: herring roe, halibut, rockfish, and seaweed. This section discusses responses to those questions.

Together, Table 2-22, Figure 2-40, and Figure 2-41 provide a broad overview of households’ assessments of their harvests in 2013. Because not everyone uses all resource categories, some households did not respond to the assessment questions. Additionally, some households that do typically use a resource category simply did not answer questions.

Nonsalmon fish is the most harvested of all subsistence resource categories used by Sitka households. Thirty-five percent of responding households explained that they used the same amount of nonsalmon fish in 2013 as they did in previous years, 28% reported that they used less, and 11% said they used more (Table 2-22; Figure 2-40). When asked why they used less, 23% of respondents reported that they did so due to working/no time (Table 2-23). Other stated reasons for using less nonsalmon fish that garnered similar response included less sharing (23%) and lack of effort (21%). For those households that used more nonsalmon fish in the study year, 48% explained they received more (Table 2-24). Other common reasons given for more use were increased effort (19%) and more success (14%). In Sitka, 21% of sampled households stated that they did not get enough nonsalmon fish (Figure 2-41). When asked to evaluate the impact of not getting enough nonsalmon fish, 56% of households that did not have enough described the impact as minor, 29% explained that not getting enough nonsalmon fish had a major effect on their household, and 13% stated that the impact was severe (Table 2-25).

Within the nonsalmon fish category, particular assessment questions were asked about household use of herring eggs, halibut, and rockfish. For herring eggs, 22% of responding households reported using the same amount of herring eggs as years past, 27% used less, and 10% used more (Table 2-22; Figure 2-40). For halibut, 31% of households that answered the assessment question reported using the same amount as previous years, 40% reported less use, and 14% explained they used more. Thirty-one percent of responding households used the same amount of rockfish as they did in previous years, 18% used less, and 7% said they used more. When asked why they used less of these resources, the main reasons given were less sharing and lack of effort (Table 2-23). Other specific stated reasons for herring eggs included family/personal reasons (13%). For halibut, 15% of households provided the reasons: family/personal, lack of equipment, and working/no time. Lack of success was a stated reason for households using less rockfish. From 47% to 60% of households stated that they used more of these resources during the study year due to receiving more (Table 2-24). Between 15% and 33% of households cited increased availability, increased effort, or needed more as other reasons for more use of 1 of these resources. In Sitka, 15% of sampled households stated that they did not get enough herring eggs, while 42% stated they did not get enough halibut; the question was not asked about rockfish (Figure 2-41). When asked to evaluate the impact of not getting enough halibut, 66% of households that did not have enough described the impact as minor, 23% explained that not getting enough halibut had a major effect on their household, and 9% stated that the impact was severe (Table 2-25). Households were not asked about the impact of not getting enough herring eggs.

Table 2-22.—Changes in household uses of resources compared to recent years, Sitka, 2013.

Resource category	Sampled households	Valid responses ^a	Households reporting use								Households not using	
			Total households		Less		Same		More			
			Number	Percentage	Number	Percentage	Number	Percentage	Number	Percentage	Number	Percentage
Any resource	212	212	208	98.1%	175	82.5%	180	84.9%	113	53.3%	211	99.5%
All resources	212	210	206	98.1%	98	46.7%	77	36.7%	31	14.8%	4	1.9%
Salmon	212	209	191	91.4%	74	35.4%	71	34.0%	46	22.0%	18	8.6%
Nonsalmon fish	212	206	151	73.3%	58	28.2%	71	34.5%	22	10.7%	55	26.7%
Herring roe	212	206	122	59.2%	56	27.2%	45	21.8%	21	10.2%	84	40.8%
Pacific halibut	212	206	175	85.0%	82	39.8%	64	31.1%	29	14.1%	31	15.0%
Rockfish	212	203	114	56.2%	36	17.7%	63	31.0%	15	7.4%	89	43.8%
Large land mammals	212	207	147	71.0%	70	33.8%	50	24.2%	27	13.0%	60	29.0%
Small land mammals	212	207	10	4.8%	5	2.4%	2	1.0%	3	1.4%	197	95.2%
Marine mammals	212	205	45	22.0%	16	7.8%	18	8.8%	11	5.4%	160	78.0%
Birds	212	205	19	9.3%	8	3.9%	6	2.9%	5	2.4%	186	90.7%
Bird eggs	212	208	1	0.5%	1	0.5%	0	0.0%	0	0.0%	207	99.5%
Marine invertebrates	212	205	143	69.8%	58	28.3%	61	29.8%	24	11.7%	62	30.2%
Vegetation	212	206	171	83.0%	49	23.8%	87	42.2%	35	17.0%	35	17.0%
Seaweed	212	202	85	42.1%	26	12.9%	42	20.8%	17	8.4%	117	57.9%

Source ADF&G Division of Subsistence household surveys, 2014.

a. Valid responses do not include households that did not provide any response.

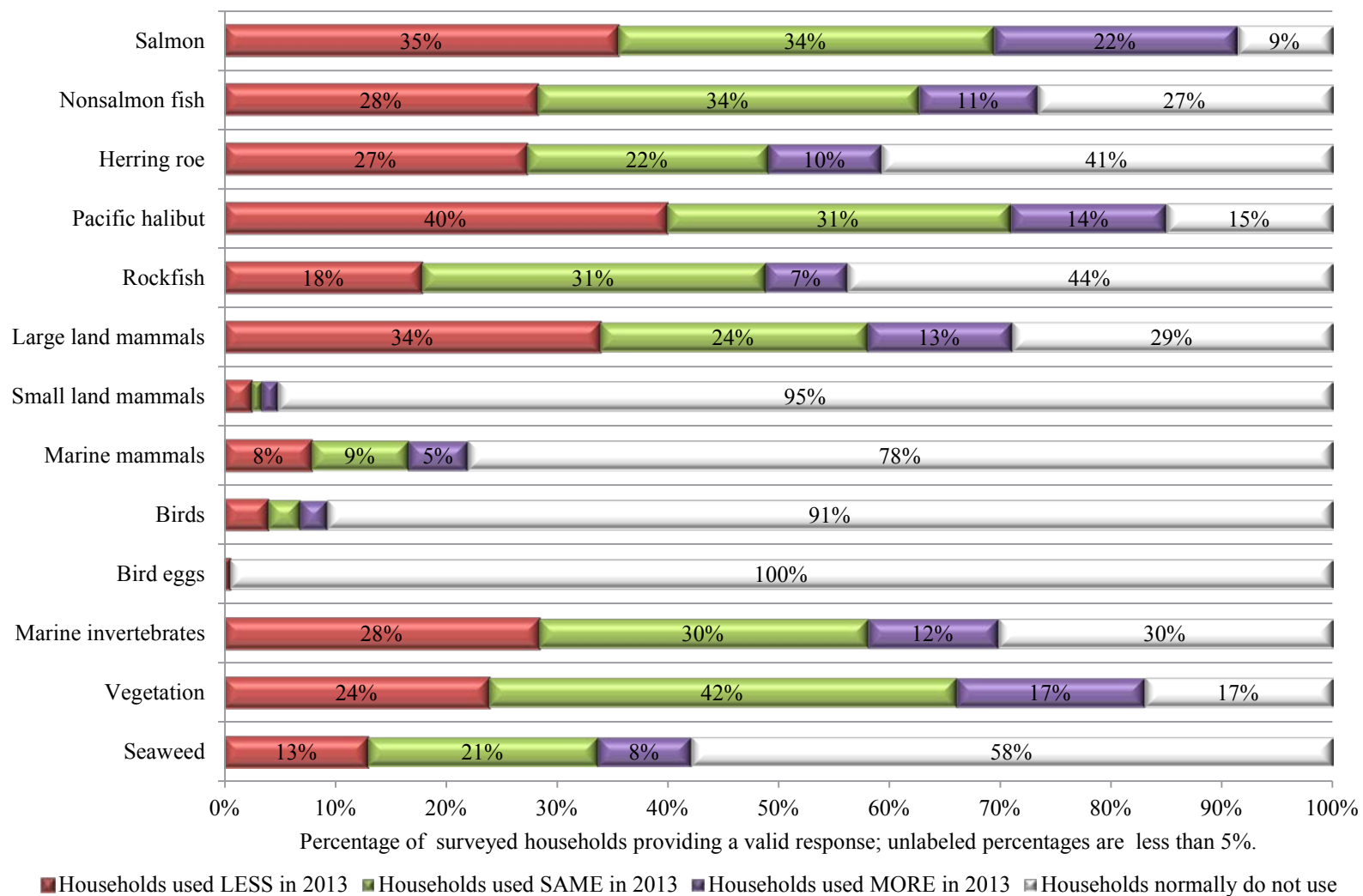


Figure 2-40.—Changes in household uses of resources compared to recent years, Sitka, 2013.

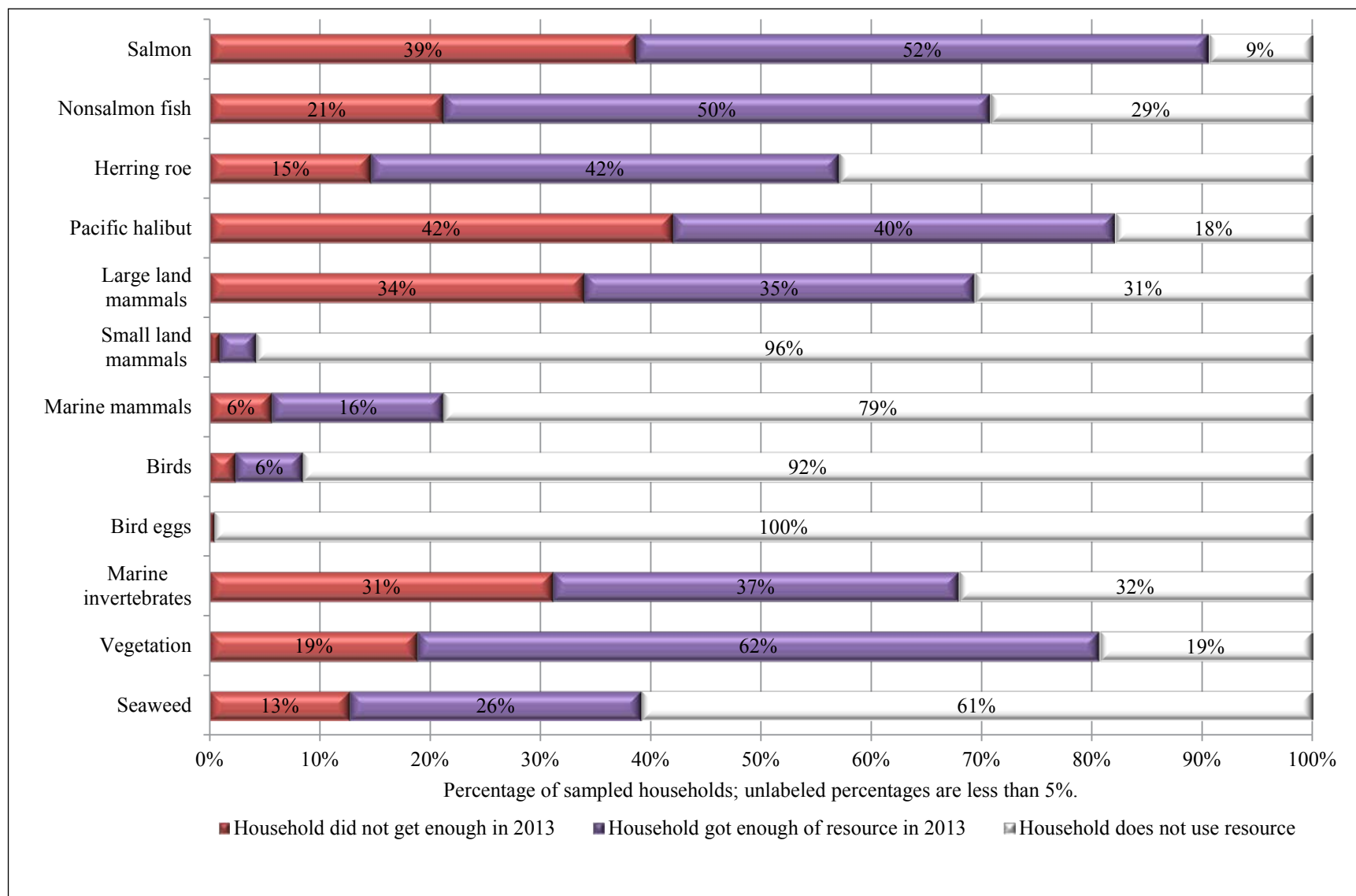


Figure 2-41.—Percentage of sampled households reporting whether they had enough resources, by resource category, Sitka, 2013.

Table 2-23.—Reasons for less household uses of resources compared to recent years, Sitka, 2013.

Resource category	Valid responses ^a	Households reporting reasons for less use	Family/ personal		Resources less available		Too far to travel		Lack of equipment		Less sharing		Lack of effort		Unsuccessful		Weather/ environment		Other reasons	
			Number	Percentage	Number	Percentage	Number	Percentage	Number	Percentage	Number	Percentage	Number	Percentage	Number	Percentage	Number	Percentage	Number	Percentage
Any resource	212	173	39	22.5%	38	22.0%	9	5.2%	23	13.3%	63	36.4%	82	47.4%	39	22.5%	9	5.2%	14	8.1%
All resources	210	92	22	23.9%	8	8.7%	1	1.1%	12	13.0%	14	15.2%	22	23.9%	6	6.5%	2	2.2%	2	2.2%
Salmon	209	74	12	16.2%	5	6.8%	0	0.0%	10	13.5%	11	14.9%	15	20.3%	6	8.1%	1	1.4%	2	2.7%
Nonsalmon fish	206	56	7	12.5%	3	5.4%	1	1.8%	6	10.7%	13	23.2%	12	21.4%	6	10.7%	1	1.8%	2	3.6%
Herring roe	206	53	7	13.2%	5	9.4%	0	0.0%	5	9.4%	18	34.0%	11	20.8%	1	1.9%	0	0.0%	3	5.7%
Pacific halibut	206	78	12	15.4%	7	9.0%	1	1.3%	12	15.4%	17	21.8%	13	16.7%	10	12.8%	0	0.0%	3	3.8%
Rockfish	203	35	1	2.9%	1	2.9%	0	0.0%	2	5.7%	7	20.0%	12	34.3%	9	25.7%	0	0.0%	0	0.0%
Large land mammals	207	68	9	13.2%	2	2.9%	1	1.5%	1	1.5%	19	27.9%	14	20.6%	16	23.5%	5	7.4%	2	2.9%
Small land mammals	207	4	0	0.0%	1	25.0%	1	25.0%	0	0.0%	0	0.0%	0	0.0%	1	25.0%	0	0.0%	0	0.0%
Marine mammals	205	16	0	0.0%	1	6.3%	0	0.0%	0	0.0%	8	50.0%	5	31.3%	1	6.3%	0	0.0%	0	0.0%
Birds	205	7	0	0.0%	2	28.6%	3	42.9%	0	0.0%	0	0.0%	4	57.1%	0	0.0%	0	0.0%	0	0.0%
Bird eggs	208	1	1	100.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
Marine invertebrates	205	57	9	15.8%	4	7.0%	1	1.8%	4	7.0%	13	22.8%	13	22.8%	3	5.3%	1	1.8%	3	5.3%
Vegetation	206	48	11	22.9%	9	18.8%	1	2.1%	0	0.0%	4	8.3%	15	31.3%	2	4.2%	1	2.1%	3	6.3%
Seaweed	202	23	5	21.7%	0	0.0%	0	0.0%	1	4.3%	8	34.8%	4	17.4%	1	4.3%	0	0.0%	0	0.0%

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Table 2-23.—Continued.

Resource category	Valid responses ^a	Households reporting reasons for less use	Working/ no time		Regulations		Small/ diseased animals		Did not get enough		Did not need		Not enough to give away		Equipment/ fuel expense		Used other resources	
			Number	Percentage	Number	Percentage	Number	Percentage	Number	Percentage	Number	Percentage	Number	Percentage	Number	Percentage	Number	Percentage
Any resource	212	173	54	31.2%	4	2.3%	13	7.5%	15	8.7%	29	16.8%	1	0.6%	7	4.0%	3	1.7%
All resources	210	92	29	31.5%	0	0.0%	1	1.1%	5	5.4%	2	2.2%	0	0.0%	5	5.4%	0	0.0%
Salmon	209	74	17	23.0%	1	1.4%	0	0.0%	4	5.4%	8	10.8%	0	0.0%	2	2.7%	0	0.0%
Nonsalmon fish	206	56	13	23.2%	2	3.6%	1	1.8%	0	0.0%	1	1.8%	0	0.0%	0	0.0%	1	1.8%
Herring roe	206	53	6	11.3%	0	0.0%	0	0.0%	1	1.9%	6	11.3%	0	0.0%	1	1.9%	0	0.0%
Pacific halibut	206	78	12	15.4%	0	0.0%	0	0.0%	5	6.4%	5	6.4%	0	0.0%	0	0.0%	1	1.3%
Rockfish	203	35	4	11.4%	0	0.0%	0	0.0%	1	2.9%	1	2.9%	0	0.0%	0	0.0%	0	0.0%
Large land mammals	207	68	12	17.6%	0	0.0%	0	0.0%	1	1.5%	3	4.4%	0	0.0%	1	1.5%	1	1.5%
Small land mammals	207	4	1	25.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
Marine mammals	205	16	1	6.3%	0	0.0%	0	0.0%	0	0.0%	3	18.8%	0	0.0%	1	6.3%	0	0.0%
Birds	205	7	1	14.3%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
Bird eggs	208	1	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
Marine invertebrates	205	57	5	8.8%	1	1.8%	10	17.5%	3	5.3%	1	1.8%	0	0.0%	1	1.8%	0	0.0%
Vegetation	206	48	14	29.2%	0	0.0%	3	6.3%	0	0.0%	3	6.3%	1	2.1%	0	0.0%	0	0.0%
Seaweed	202	23	6	26.1%	0	0.0%	0	0.0%	0	0.0%	1	4.3%	0	0.0%	1	4.3%	0	0.0%

Source ADF&G Division of Subsistence household surveys, 2014.

Note Respondents could provide multiple responses, so the percentages may sum to more than 100%.

a. Valid responses do not include households that did not provide any response and households reporting never using the resource.

Table 2-24.—Reasons for more household uses of resources compared to recent years, Sitka, 2013.

Resource category	Valid responses ^a	Households reporting reasons for more use	Increased availability		Used other resources		Favorable weather		Received more		Needed more		Increased effort		Had more help	
			Number	Percentage	Number	Percentage	Number	Percentage	Number	Percentage	Number	Percentage	Number	Percentage	Number	Percentage
Any resource	212	109	27	24.8%	1	0.9%	5	4.6%	62	56.9%	19	17.4%	40	36.7%	5	4.6%
All resources	210	30	10	33.3%	0	0.0%	1	3.3%	8	26.7%	5	16.7%	7	23.3%	1	3.3%
Salmon	209	44	7	15.9%	0	0.0%	0	0.0%	19	43.2%	2	4.5%	13	29.5%	0	0.0%
Nonsalmon fish	206	21	2	9.5%	0	0.0%	0	0.0%	10	47.6%	2	9.5%	4	19.0%	0	0.0%
Herring roe	206	20	3	15.0%	0	0.0%	1	5.0%	12	60.0%	3	15.0%	2	10.0%	0	0.0%
Pacific halibut	206	29	3	10.3%	0	0.0%	0	0.0%	16	55.2%	2	6.9%	7	24.1%	0	0.0%
Rockfish	203	15	1	6.7%	1	6.7%	0	0.0%	7	46.7%	1	6.7%	5	33.3%	0	0.0%
Large land mammals	207	27	2	7.4%	0	0.0%	1	3.7%	20	74.1%	1	3.7%	2	7.4%	0	0.0%
Small land mammals	207	3	1	33.3%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	2	66.7%	0	0.0%
Marine mammals	205	10	0	0.0%	0	0.0%	0	0.0%	5	50.0%	0	0.0%	4	40.0%	0	0.0%
Birds	205	5	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	5	100.0%	0	0.0%
Bird eggs	208	0	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
Marine invertebrates	205	24	2	8.3%	0	0.0%	0	0.0%	15	62.5%	2	8.3%	3	12.5%	0	0.0%
Vegetation	206	32	18	56.3%	0	0.0%	3	9.4%	1	3.1%	2	6.3%	10	31.3%	4	12.5%
Seaweed	202	17	0	0.0%	0	0.0%	0	0.0%	10	58.8%	5	29.4%	3	17.6%	0	0.0%

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Table 2-24.—Continued.

Resource category	Valid responses ^a	Households reporting reasons for more use	Other		Regulations		Traveled farther		More success		Needed less		Store-bought expense		Got/ fixed equipment	
			Number	Percentage	Number	Percentage	Number	Percentage	Number	Percentage	Number	Percentage	Number	Percentage	Number	Percentage
Any resource	212	109	14	12.8%	2	1.8%	1	0.9%	17	15.6%	1	0.9%	2	1.8%	0	0.0%
All resources	210	30	0	0.0%	1	3.3%	1	3.3%	2	6.7%	0	0.0%	1	3.3%	0	0.0%
Salmon	209	44	6	13.6%	0	0.0%	0	0.0%	4	9.1%	0	0.0%	0	0.0%	0	0.0%
Nonsalmon fish	206	21	1	4.8%	0	0.0%	0	0.0%	3	14.3%	0	0.0%	1	4.8%	0	0.0%
Herring roe	206	20	1	5.0%	0	0.0%	0	0.0%	2	10.0%	0	0.0%	0	0.0%	0	0.0%
Pacific halibut	206	29	1	3.4%	0	0.0%	0	0.0%	4	13.8%	0	0.0%	0	0.0%	0	0.0%
Rockfish	203	15	1	6.7%	0	0.0%	0	0.0%	2	13.3%	0	0.0%	0	0.0%	0	0.0%
Large land mammals	207	27	1	3.7%	0	0.0%	0	0.0%	3	11.1%	1	3.7%	0	0.0%	0	0.0%
Small land mammals	207	3	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
Marine mammals	205	10	3	30.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
Birds	205	5	0	0.0%	0	0.0%	0	0.0%	1	20.0%	0	0.0%	0	0.0%	0	0.0%
Bird eggs	208	0	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
Marine invertebrates	205	24	0	0.0%	2	8.3%	0	0.0%	3	12.5%	0	0.0%	0	0.0%	0	0.0%
Vegetation	206	32	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
Seaweed	202	17	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%

Source ADF&G Division of Subsistence household surveys, 2014.

Note Respondents could provide multiple responses, so the percentages may sum to more than 100%.

a. Valid responses do not include households that did not provide any response and households reporting never use.

Table 2-25.—Reported impact to households reporting that they did not get enough of a type of resource, Sitka, 2013.

Resource category	Sample households	Households not getting enough				Impact to those not getting enough									
		Valid responses ^a		Did not get enough		No response		Not noticeable		Minor		Major		Severe	
		Number	Percentage	Number	Percentage	Number	Percentage	Number	Percentage	Number	Percentage	Number	Percentage	Number	Percentage
All resources	212	206	97.2%	96	46.6%	2	2.1%	4	4.2%	43	44.8%	38	39.6%	9	9.4%
Salmon	212	192	90.6%	82	42.7%	1	1.2%	0	0.0%	55	67.1%	21	25.6%	5	6.1%
Nonsalmon fish	212	150	70.8%	45	30.0%	1	2.2%	0	0.0%	25	55.6%	13	28.9%	6	13.3%
Herring roe	212	121	57.1%	31	25.6%	—	—	—	—	—	—	—	—	—	—
Pacific halibut	212	174	82.1%	89	51.1%	1	1.1%	0	0.0%	59	66.3%	21	23.6%	8	9.0%
Large land mammals	212	147	69.3%	72	49.0%	2	2.8%	0	0.0%	37	51.4%	24	33.3%	9	12.5%
Small land mammals	212	9	4.2%	2	22.2%	0	0.0%	0	0.0%	1	50.0%	1	50.0%	0	0.0%
Marine mammals	212	45	21.2%	12	26.7%	1	8.3%	0	0.0%	9	75.0%	0	0.0%	2	16.7%
Birds	212	18	8.5%	5	27.8%	0	0.0%	0	0.0%	3	60.0%	2	40.0%	0	0.0%
Bird eggs	212	1	0.5%	1	100.0%	0	0.0%	0	0.0%	0	0.0%	1	100.0%	0	0.0%
Marine invertebrates	212	144	67.9%	66	45.8%	2	3.0%	0	0.0%	48	72.7%	12	18.2%	4	6.1%
Vegetation	212	171	80.7%	40	23.4%	0	0.0%	0	0.0%	33	82.5%	4	10.0%	3	7.5%
Seaweed	212	83	39.2%	27	32.5%	2	7.4%	0	0.0%	17	63.0%	6	22.2%	2	7.4%

Source ADF&G Division of Subsistence household surveys, 2014.

Note "—" indicates the question about the severity of not having enough resources was not asked.

a. Includes households failing to respond to the question and those households that never used the resource.

Table 2-26.—Things households reported doing differently as the result of not getting enough of a resource, Sitka, 2013.

Resource category	Valid responses ^a	Bought/bartered		Used more commercial foods		Replaced with other subsistence foods		Asked others for help		Made do without	
		Number	Percentage	Number	Percentage	Number	Percentage	Number	Percentage	Number	Percentage
All resources	63	0	0.0%	51	81.0%	1	1.6%	1	1.6%	9	14.3%
Salmon	57	3	5.3%	41	71.9%	3	5.3%	5	8.8%	8	14.0%
Nonsalmon fish	34	1	2.9%	26	76.5%	2	5.9%	0	0.0%	5	14.7%
Pacific halibut	54	4	7.4%	35	64.8%	14	25.9%	1	1.9%	4	7.4%
Large land mammals	49	0	0.0%	44	89.8%	3	6.1%	2	4.1%	4	8.2%
Small land mammals	0	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
Marine mammals	5	1	20.0%	3	60.0%	0	0.0%	1	20.0%	0	0.0%
Birds	3	0	0.0%	2	66.7%	0	0.0%	0	0.0%	0	0.0%
Bird eggs	0	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
Marine invertebrates	27	0	0.0%	18	66.7%	4	14.8%	1	3.7%	5	18.5%
Vegetation	17	1	5.9%	13	76.5%	0	0.0%	1	5.9%	2	11.8%
Seaweed	14	1	7.1%	8	57.1%	0	0.0%	2	14.3%	4	28.6%

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Table 2-26.—Continued.

Resource category	Valid responses ^a	Increased effort to harvest		Got a job		Obtained food from other sources		Got public assistance		Other reasons	
		Number	Percentage	Number	Percentage	Number	Percentage	Number	Percentage	Number	Percentage
All resources	63	1	1.6%	1	1.6%	0	0.0%	1	1.6%	5	7.9%
Salmon	57	1	1.8%	0	0.0%	0	0.0%	1	1.8%	6	10.5%
Nonsalmon fish	34	0	0.0%	0	0.0%	1	2.9%	0	0.0%	1	2.9%
Pacific halibut	54	0	0.0%	0	0.0%	1	1.9%	0	0.0%	3	5.6%
Large land mammals	49	0	0.0%	0	0.0%	0	0.0%	0	0.0%	2	4.1%
Small land mammals	0	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
Marine mammals	5	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
Birds	3	0	0.0%	0	0.0%	0	0.0%	0	0.0%	1	33.3%
Bird eggs	0	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
Marine invertebrates	27	0	0.0%	0	0.0%	0	0.0%	0	0.0%	1	3.7%
Vegetation	17	0	0.0%	0	0.0%	0	0.0%	0	0.0%	1	5.9%
Seaweed	14	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%

Source ADF&G Division of Subsistence household surveys, 2014.

Note Respondents could provide multiple responses, so the percentages may sum to more than 100%.

a. Includes households failing to respond to the question and those households that never used the resource.

Salmon is the second most harvested of all subsistence resource categories used by Sitka households. Thirty-four percent of responding households explained that they used the same amount of salmon in 2013 as they did in previous years, 35% reported that they used less, and 22% said they used more (Table 2-22; Figure 2-40). When asked why they used less, 23% of respondents reported that they did so due to working/no time (Table 2-23). Other stated reasons for using less salmon included lack of effort (20%), family/personal reasons (16%), and less sharing (15%). For those households that used more salmon in the study year, 43% explained that they received more (Table 2-24). Other reasons given for more use included increased effort (30%) and increased availability (16%). In Sitka, 39% of sampled households stated that they did not get enough salmon (Figure 2-41). When asked to evaluate the impact of not getting enough salmon, 67% of households that did not have enough described the impact as minor, 26% explained that not getting enough salmon had a major effect on their household, and 6% stated that the impact was severe (Table 2-25).

Large land mammals is the next most harvested of all subsistence resource categories used by Sitka households. Twenty-four percent of responding households explained that they used the same amount of large land mammals in 2013 as they did in previous years, 34% reported that they used less, and 13% said they used more (Table 2-22; Figure 2-40). When asked why they used less, 28% of respondents reported that they did so due to less sharing (Table 2-23). Between 18% and 24% of respondents who used less large land mammals cited the reasons working/no time, lack of effort, and unsuccessful efforts. For those households that used more large land mammals in the study year, 74% explained it was due to receiving more (Table 2-24). In Sitka, 34% of sampled households stated that they did not get enough large land mammals (Figure 2-41). When asked to evaluate the impact of not getting enough large land mammals, 51% of households that did not have enough described the impact as minor, 33% explained that not getting enough large land mammals had a major effect on their household, and 13% stated that the impact was severe (Table 2-25).

Marine invertebrates follows as the next most harvested of all subsistence resource categories used by Sitka households. Thirty percent of responding households explained that they used the same amount of marine invertebrates in 2013 as they did in previous years, 28% reported that they used less, and 12% said they used more (Table 2-22; Figure 2-40). When asked why they used less, 23% of respondents reported that they did so due to less sharing and lack of effort (Table 2-23). Other stated reasons for using less marine invertebrates included small/diseased animals (18%) and family/personal reasons (16%). For those households that used more marine invertebrates in the study year, 63% explained it was due to receiving more (Table 2-24). Increased effort and more success were cited by 13% of respondents as reasons for more use. In Sitka, 31% of sampled households stated that they did not get enough marine invertebrates (Figure 2-41). When asked to evaluate the impact of not getting enough marine invertebrates, 73% of households that did not have enough described the impact as minor, 18% explained that not getting enough marine invertebrates had a major effect on their household, and 6% stated that the impact was severe (Table 2-25).

Vegetation rounds out the most harvested of subsistence resource categories used by Sitka households. Forty-two percent of responding households explained that they used the same amount of vegetation in 2013 as they did in previous years, 24% reported that they used less, and 17% said they used more (Table 2-22; Figure 2-40). When asked why they used less, 31% of respondents reported that they did so due to lack of effort, followed closely by working/no time (29%) and then family/personal reasons (23%) (Table 2-23). For those households that used more vegetation in the study year, 56% explained it was due to increased availability (Table 2-24). Other reasons given included increased effort (31%) and had more help (13%). In Sitka, 19% of sampled households stated that they did not get enough vegetation (Figure 2-41). When asked to evaluate the impact of not getting enough vegetation, 83% of households that did not have enough described the impact as minor, 10% explained that not getting enough vegetation had a major effect on their household, and 8% stated that the impact was severe (Table 2-25).

Seaweed was asked about separately from vegetation; 21% of responding households explained that they used the same amount of seaweed in 2013 as they did in previous years, 13% reported that they used less, and 8% said they used more (Table 2-22; Figure 2-40). When asked why they used less, 35% of respondents reported that they did so due to less sharing (Table 2-23). Other stated reasons for using less seaweed included working/no time (26%), family/personal reasons (22%), and lack of effort (17%). For

those households that used more seaweed in the study year, 59% explained it was due to receiving more and 18% said it was due to increased effort (Table 2-24). In Sitka, 13% of sampled households stated that they did not get enough seaweed (Figure 2-41). When asked to evaluate the impact of not getting enough seaweed, 63% of households that did not have enough described the impact as minor, 22% explained that not getting enough seaweed had a major effect on their household, and 7% stated that the impact was severe (Table 2-25).

Marine mammals is one of the least harvested of all subsistence resource categories used by Sitka households overall, in large part because they are used primarily only by Alaska Native households. Nine percent of responding households explained that they used the same amount of marine mammals in 2013 as they did in previous years, 8% reported that they used less, and 5% said they used more (Table 2-22; Figure 2-40). When asked why they used less, 50% of respondents reported that they did so due to less sharing (Table 2-23). Other stated reasons for using less marine mammals included lack of effort (31%) or did not need (19%). For those households that used more marine mammals in the study year, 50% explained it was due to receiving more and 40% indicated it was through increased effort (Table 2-24). In Sitka, 6% of sampled households stated that they did not get enough marine mammals (Figure 2-41). When asked to evaluate the impact of not getting enough marine mammals, 75% of households that did not have enough described the impact as minor and 17% stated that the impact was severe (Table 2-25).

The majority of Sitka households do not use birds, bird eggs, or small land mammals. More households (2%–4%) reported that they used less of these resources in 2013 as they did in previous years, a few (1%–3%) said they used the same amount, and a few (1%–2%) explained that they used more (Table 2-22; Figure 2-40). The reasons for less household use varied from personal/family reasons (100% for bird eggs), to lack of effort (57% for birds) and too far to travel (43% for birds and 25% for small land mammals) (Table 2-23). Resources not available was an additional reason given for birds (29%) and small land mammals (25%). The same percentage of households also indicated that they were working/had no time or were unsuccessful in their small land mammal harvest. For those households that got more of these resources during the study year, the most common reason why was increased effort (100% for birds and 67% for small land mammals) (Table 2-24). Twenty percent of households also indicated greater use of birds was due to more success. Of households that used these resources, from 22% (small land mammals) to 100% (bird eggs) of households reported that they did not get enough (Table 2-25). When asked to evaluate the impact of not getting of these resources, respondents indicated it was a minor or major impact; no households reported a severe impact.

Assessing household use of all subsistence resources overall, 37% of responding households explained that they used the same amount of all resources in 2013 as they did in previous years, 47% reported that they used less, and 15% said they used more (Table 2-22; Figure 2-40). When asked why they used less, 32% of respondents reported that they did so due to working/no time (Table 2-23). Other stated reasons for using less overall resources included lack of effort, family/personal reasons, less sharing, and lack of equipment. For those households that used more resources in the study year, 33% explained that there was increased availability (Table 2-24). Other more common reasons given for more use included received more (27%) and increased effort (23%). In Sitka, 45% of sampled households stated that they did not get enough overall resources (Table 2-25). When asked to evaluate the impact of not getting enough resources, 45% of households that did not have enough of all resources described the impact as minor, 40% explained that not getting enough overall resources had a major effect on their household, and 9% stated that the impact was severe.

For all resources, households that did not get enough of the specific resource largely adapted by using commercial foods (Table 2-26). With 3 grocery stores that are regularly serviced by barge deliveries and a median income on par with the state of Alaska overall, residents of Sitka are in a position to replace subsistence foods with commercial ones when necessary. While the commercial foods may meet the physical needs of the households, most respondents indicated displeasure with having to purchase beef or chicken, and many offered that they would not buy fish from the store. In addition to the grocery store, there is some direct sale of fish from commercial fishermen to residents that occurs. More households (89%) indicated commercial food substitution was true for large land mammals than for any other resource

category. Resources that were less likely to be replaced by commercial foods included halibut, marine mammals, and seaweed, but commercial replacement of these foods was still the primary adaptive strategy for Sitka households. For all resources except for halibut and marine mammals, the second most common adaptation households made when not getting enough was simply to make do without the resource. The second most common adaptation for halibut was to replace with other subsistence foods, which several households also reported doing for marine invertebrates. Marine mammals was one of the only resource categories for which a substantial percent (20%) of households reported buying/bartering or asking others for help when they did not get enough. Marine mammals are not a commercially available resource and there is no ready substitute for it, so it is not too surprising that households would barter or buy marine mammals from other households. Under the MMPA, it is legal for Alaska Natives to sell marine mammal meat to other Alaska Natives. There were 14% of households that asked for help when they did not get enough seaweed. No more than 10% of households reported any other specific adaptation strategies for coping with a lack of resources. For the resource category of birds, about one-third of households reported an adaptation not listed.

Households that reported not having enough resources were asked which resources they needed. Responses to these questions are presented in Table 2-27. Deer was the resource needed by the most households (38%), followed by halibut (21%), Chinook salmon (20%), unspecified salmon (18%), sockeye salmon (14%), shrimp (13%), and coho salmon (10%). No other resources were reported as being needed by more than 10% of households.

Table 2-27.—Resources that households reported needing, Sitka, 2013.

Resource	Households needing	Percentage of households
All resources	7	3.3%
Fish	21	9.9%
Salmon	37	17.5%
Chum salmon	2	0.9%
Coho salmon	22	10.4%
Chinook salmon	43	20.3%
Pink salmon	3	1.4%
Sockeye salmon	29	13.7%
Salmon roe	1	0.5%
Nonsalmon fish	2	0.9%
Pacific herring	5	2.4%
Pacific herring roe	1	0.5%
Pacific herring roe/unspecified	2	0.9%
Pacific herring roe on hemlock branches	3	1.4%
Cod	4	1.9%
Lingcod	7	3.3%
Pacific halibut	44	20.8%
Rockfish	12	5.7%
Black rockfish	1	0.5%
Yelloweye rockfish	7	3.3%
Sablefish (black cod)	8	3.8%
Cutthroat trout	1	0.5%
Rainbow trout	1	0.5%
Large land mammals	4	1.9%
Black bear	1	0.5%
Caribou	2	0.9%
Deer	80	37.7%
Elk	2	0.9%
Mountain goat	1	0.5%
Moose	13	6.1%
North American river (land) otter	1	0.5%
Marten	2	0.9%
Seal	5	2.4%
Harbor seal	1	0.5%
Unknown seal oil	3	1.4%
Sea otter	2	0.9%
Migratory birds	1	0.5%
Ducks	1	0.5%
Mallard	2	0.9%
Geese	2	0.9%
Canada goose	1	0.5%
White-fronted goose	1	0.5%
Glaucous-winged gull eggs	1	0.5%
Marine invertebrates	10	4.7%
Abalone	5	2.4%
Chitons (bidarkis, gumboots)	2	0.9%

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Table 2-27.—Page 2 of 2.

Resource	Households needing	Percentage of households
Black (small) chitons	3	1.4%
Clams	17	8.0%
Butter clams	2	0.9%
Razor clams	2	0.9%
Cockles	9	4.2%
Crabs	18	8.5%
Dungeness crab	9	4.2%
King crab	1	0.5%
Red king crab	1	0.5%
Tanner crab	1	0.5%
Octopus	2	0.9%
Oyster	1	0.5%
Scallops	2	0.9%
Sea cucumber	1	0.5%
Shrimp	27	12.7%
Vegetation	4	1.9%
Berries	16	7.5%
Blueberry	17	8.0%
Lowbush cranberry	1	0.5%
Huckleberry	9	4.2%
Cloudberry	1	0.5%
Raspberry	3	1.4%
Salmonberry	8	3.8%
Strawberry	1	0.5%
Thimbleberry	1	0.5%
Plants, greens, and mushrooms	1	0.5%
Beach asparagus	3	1.4%
Wild rhubarb	1	0.5%
Unknown mushrooms	2	0.9%
Seaweed/kelp	5	2.4%
Black seaweed	21	9.9%
Bull kelp	2	0.9%
Red seaweed	1	0.5%
Sea ribbons	3	1.4%
Alaria	1	0.5%
Bladder wrack	2	0.9%
Unknown seaweed	1	0.5%

Source ADF&G Division of Subsistence household surveys, 2014.

Harvest Data

Changes in the harvest of resources by Sitka residents can also be discerned through comparisons with findings from other study years. Comprehensive subsistence harvest surveys were conducted in Sitka for the 1983 study year (Gmelch and Gmelch 1985), the 1987 study year, and the 1996 study year.⁶ The 1983 study did not collect data that was comparable to the subsequent 3 study years and will not be included in the following discussion.⁷ The survey population of Sitka residents was defined the same for the other (1987, 1996, and 2013) studies, but the survey year and sampling method differed slightly. The 1996 and 2013 surveys were based on a February–January survey year, while the 1987 study was the calendar year. The 1996 and 2013 studies also drew a stratified random sample of Sitka households, stratifying on enrollment in the Sitka Tribe of Alaska. The 1987 study was a simple random sample of all Sitka households. The different definitions of the study year are likely of little consequence for a comparison of results. The changed sampling method for 1996 and 2013 may have resulted in more accurate estimations of some resources more heavily harvested by Alaska Natives only, such as marine mammals or herring eggs.

Several differences in the harvest of wild resources emerge from inspection of harvest data from 1987 through 2013. Per capita harvests provide the most meaningful comparisons since population fluctuations are taken into account. The overall per capita harvest has not changed significantly over the 3 study years; in 1987, an estimated 145 lb per capita ($\pm 22\%$) were harvested; this increased to 205 lb per capita ($\pm 22\%$) in 1996 before decreasing to 175 lb per capita ($\pm 34\%$) in 2013 (Figure 2-42). For many resource categories, harvests increased from 1987 to 1996 before decreasing slightly in 2013, but still a greater amount than in 1987 (Figure 2-43). The resource categories for which this is not true is nonsalmon fish, large land mammals, and vegetation. Harvests of nonsalmon fish and vegetation have grown over each study year while the per capita harvest of large land mammals declined from 1996 to a lower amount than in 1987. Taken as a percentage of the overall harvest, these 3 resource categories show the greatest change over the years; the other resource categories do not differ substantially (Table 2-28).

Looking at the composition of the nonsalmon fish harvest, halibut harvests have dominated the harvest every survey year and increased approximately 50% compared to the 1987 level; the per capita harvest in 1987 was 24 lb, which increased to 36 lb by 2013 (CSIS; Table 2-12). This is a similar trend to other Southeast Alaska communities (see Sill and Koster 2017) likely due at least in part to the creation of the federal subsistence halibut fishery in 2003. While 44% of the halibut harvested in 2013 was removed from commercial catches, 39% was harvested with longline or skate, which is a method only available under the federal subsistence fishery; federal regulations also allow a harvest of up to 20 halibut a day, compared to 2 a day under the previous sport fishing-only regulations (Table 2-16). This regulatory change may also account in part for the increased harvest of cod and lingcod, species which can also be harvested with longline gear (CSIS; Table 2-12). Subsistence harvests of sablefish have also increased over the course of the surveys, with no harvest recorded in 1987 and only a small amount (less than 1 lb per person) in 1996 (CSIS). By 2013, sablefish harvests increased to 6 lb per person (Table 2-12). Anecdotal reports indicate increasing participation throughout Southeast Alaska in subsistence and personal use sablefish fisheries, to the extent that a subsistence/personal use sablefish permit was created in 2012 to try to improve harvest estimates in these fisheries (Alaska Department of Fish and Game 2012). Sablefish have also become the most commercially valuable groundfish species in Southeast Alaska (Green et al. 2014). Increased sablefish harvests may also be in part a result of the creation of the federal subsistence halibut fishery; 94% of all sablefish was harvested with longlines or skates (Table 2-16).

6. Results for the 1987 and 1996 comprehensive subsistence harvest and use surveys are available online; see the ADF&G Community Subsistence Information System (CSIS): <http://www.adfg.alaska.gov/sb/CSIS/>.

7. The 1983 study collected baseline information about the harvest and use of wild resources by Sitka residents; however, most likely due to issues with the survey sample, the results of the study were determined to be not representative of the community. The results of the study can be found in Gmelch and Gmelch (1985).

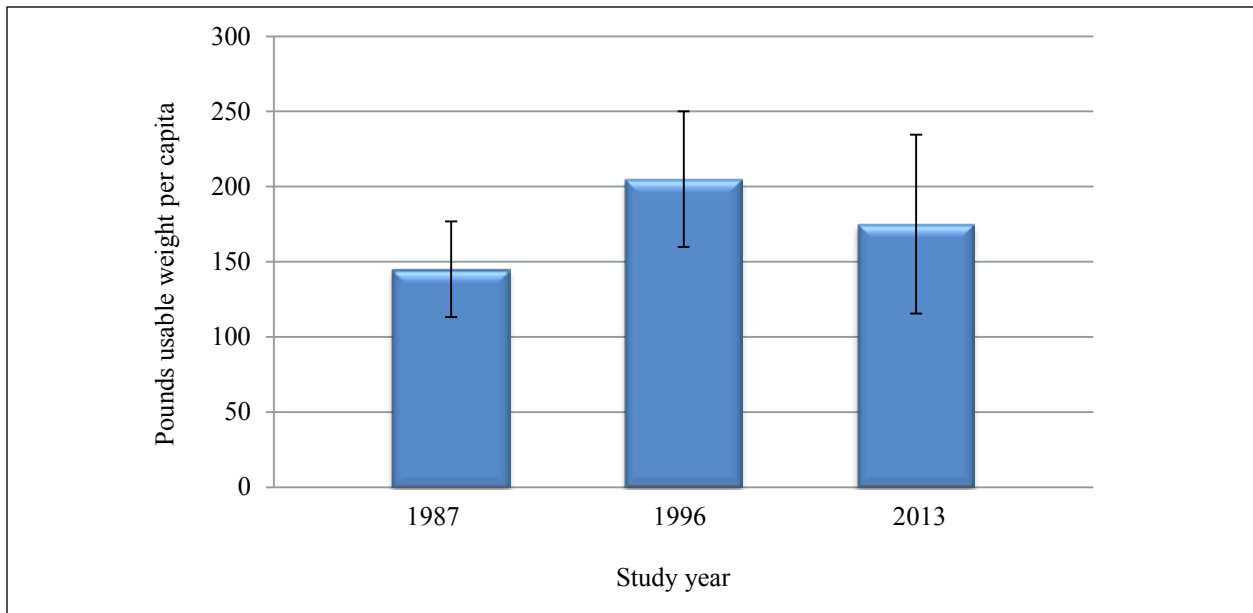


Figure 2-42.—Estimated per capita harvests in pounds usable weight, Sitka, 1987, 1996, and 2013.

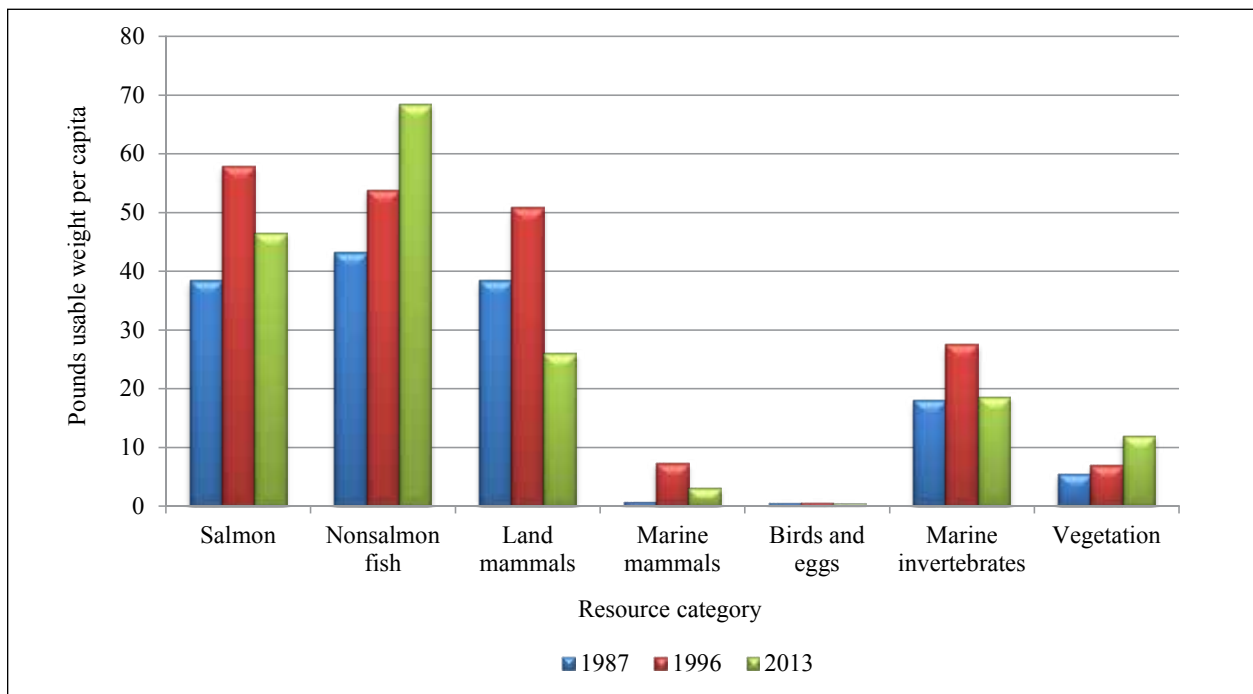


Figure 2-43.—Estimated per capita harvests in pounds usable weight by resource category, Sitka, 1987, 1996, and 2013.

Table 2-28.—Comparison of harvest composition by resource category, Sitka, 1987, 1996, and 2013.

Resource category	1987	1996	2013
Salmon	26.5%	28.2%	26.6%
Nonsalmon fish	29.9%	26.3%	39.1%
Land mammals	26.5%	24.9%	14.8%
Marine mammals	0.5%	3.6%	1.8%
Birds and eggs	0.4%	0.3%	0.3%
Marine invertebrates	12.4%	13.4%	10.6%
Vegetation	3.8%	3.4%	6.9%

Sources Community Subsistence Information System (CSIS) for 1987 and 1996 data; ADF&G Division of Subsistence household surveys, 2014, for 2013 data.

Harvests of large land mammals have experienced the opposite trend of nonsalmon fish; the 2013 estimated harvest is the lowest of the 3 study years. Deer composes the majority of the large land mammal harvest of Sitka in any given year, so changes to that resource drive changes to the overall category. The estimated deer harvest in 2013 was 25 lb per capita, compared to per capita harvests in 1996 and 1987 of 44 lb and 38 lb, respectively (Table 2-12; CSIS). Interestingly, there was also no moose or goat harvest in 2013 as documented through the survey, further decreasing the overall harvest estimate (Table 2-12). Deer populations in Southeast Alaska are affected by winter weather; severe winters can dramatically reduce deer populations, which happened in 2006. The winters of 2006–2008 were ones of severe weather, setting records for snow depth throughout much of Southeast Alaska. Beginning in 2010, milder winters led to increased survival of fawns and yearlings (Mooney 2015). The low deer harvest in 2013 could be an effect of smaller deer populations over the preceding few years; it would be expected that as the deer population continues to increase with milder winters, deer harvests would also increase.

Current and Historical Harvest Areas

Each of the 3 comprehensive studies conducted in Sitka have had a mapping component, though methods have varied with each study. In 1987, lifetime use areas were mapped by survey respondents (Figure 2-44). For the 1996 survey, locations of harvesting activities over the previous 5 years were mapped by survey respondents. Finally, in 2013, only harvest locations used over the study period were mapped. Mapped data from 1996 are not available. Comparing 2013 to 1987 mapped locations for all resources, as would be expected given the differences in the time periods covered, a smaller area is shown for the 2013 study year. In 1987, respondents stated that they used almost all of Baranof Island and much of the southern portion of Chichagof Island, as well as some of Admiralty and Kuiu islands, over their lifetimes as Sitka residents. In 2013, Baranof Island was still used, though a smaller portion of it, concentrating on the area close to Sitka and up the coast toward Klag Bay, as well as Kuiu Island. Chichagof Island was not used to near the same extent, and no effort was recorded from Admiralty Island. However, there were much further flung locations recorded on the 2013 survey, including on the Southeast Alaska mainland, around Petersburg and Haines, and in central Prince of Wales Island.

Some of these differences are attributable to the differing methods between the study years. Not every location is used every year; if enough fish or deer are available to harvest in the first location a hunter or fisher goes, they are not likely to try other areas. It would be expected that a map of lifetime use areas is more extensive than one of a single year's harvest. There may also be socioeconomic factors at play with a smaller harvesting area. In other communities in Southeast Alaska, the cost of gas and equipment has been a limiting factor to harvesting activities, constraining how far residents will go to search for resources. Fuel costs were offered as a reason for less resource use by some survey respondents in 2013. Mapping information at the resource category level is not available for the 1987 data, but could provide additional insights into the change in harvesting locations.

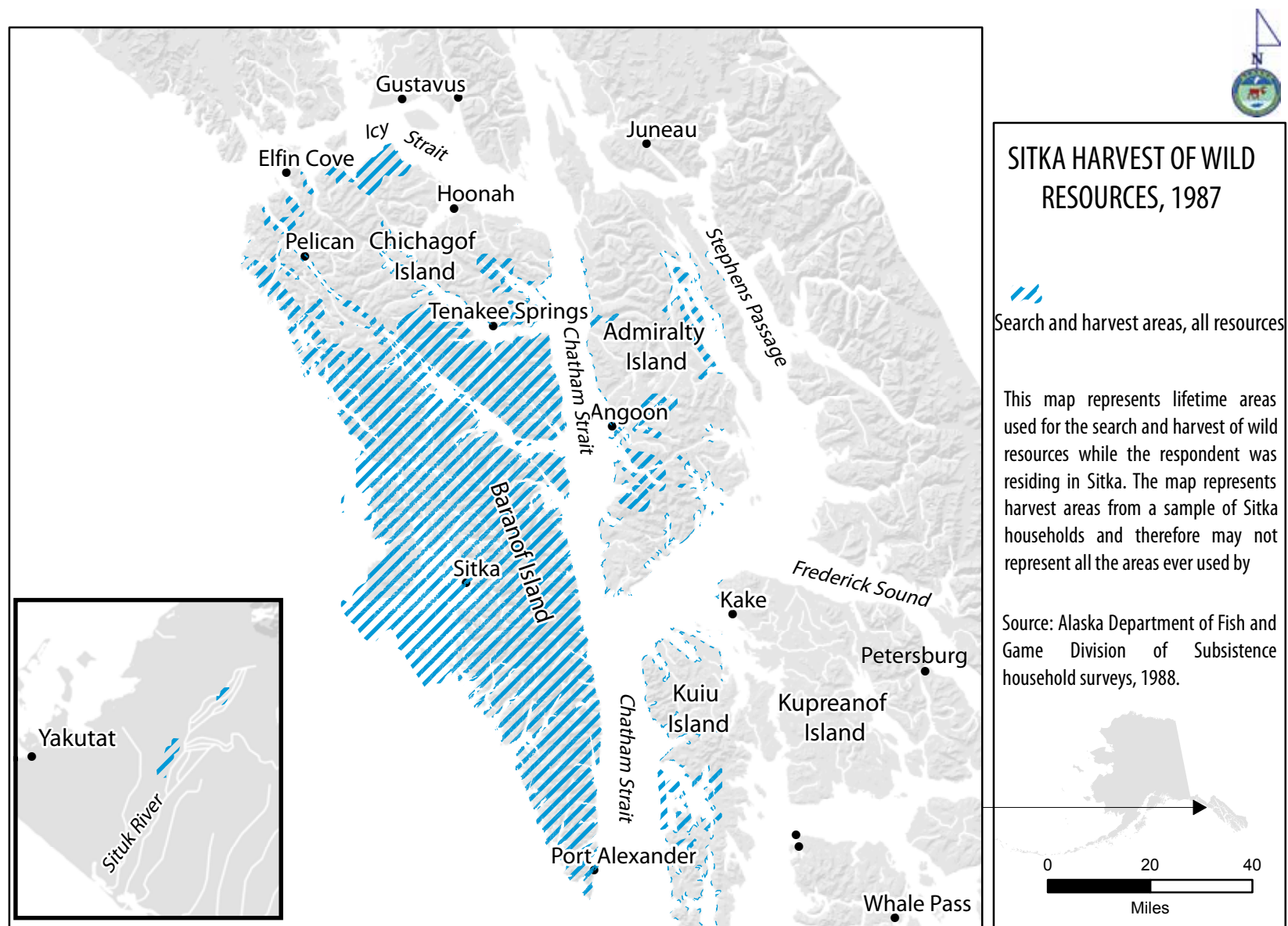


Figure 2-44.—Fishing, hunting, gathering, and harvest locations, all resources, Sitka, 1987.

LOCAL COMMENTS AND CONCERNS

Following is a summary of local observations of wild resource populations and trends that were recorded during the surveys in Sitka. Some households did not offer any additional information during the survey interviews, so not all households are represented in the summary.

Fish

The majority of comments specific to fish were about herring eggs. Many respondents expressed concern for the health of the herring stocks due to perceived overfishing by the commercial sac roe fleet. There were many requests to reduce pressure on the stocks or to stop fishing for some amount of time. While 2013 appeared to be a better year in comparison to the previous several harvests, many respondents still noted that it was much less than in years past. Some people also were concerned about the characteristics of the herring spawn in terms of time, location, and duration. The unique role Sitka plays in supplying herring eggs to the rest of the state was highlighted as an example of why this resource is particularly important, as was herring's role in the whole food chain of Sitka Sound.

In addition to herring eggs, much of the concern voiced during the surveys was for halibut. According to respondents, there are fewer halibut than there used to be, especially in areas close to Sitka. Some of the concern for halibut stocks came from a perception of overfishing by the commercial industry, overfishing and/or taking too many small halibut by the charter boat industry, and the use of what is thought to be an excessive number of hooks allowed in the subsistence halibut fishery.

Some concern was expressed for salmon stocks; sockeye salmon in Klag Bay, Gut Bay, and Falls Lake were singled out as areas of concern, as were Chinook salmon populations in general and coho salmon populations due to the effort by the charter fishing fleet. The cost of fuel caused some respondents to prioritize efficiency in harvest, and, coupled with regulations limiting amount of fish one can harvest (e.g., Chinook [king] salmon limits of 1 fish), they felt it was not always worth the effort to fish. For freshwater fish, one respondent felt that it was unnecessary to regulate the subsistence trout fishery, while another was concerned about landlocked salmon predation on trout in Green Lake.

Large Land Mammals

There were some comments given on each of the large land mammals found in the Sitka area. Deer garnered the most comments. The importance of deer to Sitka residents and their superior health benefits as a food source were mentioned repeatedly. Some comments concerned regulations; a few respondents voiced their potential concerns for the deer population because of the January deer season and the opportunity to shoot does. Others felt that as the deer population grew, hunting bag limits should also increase. Hunting licenses currently are valid for 1 calendar year, which means residents who wish to hunt deer in January have to get a license in the middle of the hunting season. Some residents would like to see the license be good for the entire deer season. There were also concerns expressed about hunting access; deer hunting is expensive and often requires a boat, which makes the resource harder to get. Federal regulations allow any federally qualified subsistence user to designate another federally qualified subsistence user to harvest deer on his or her behalf; all Sitka residents would qualify as a subsistence user. State regulations allow for proxy hunting if the beneficiary is blind, physically disabled, or over 65 (5 AAC 92.011). Some people expressed the need for a way to find proxy hunters or designated hunters. Only 2 comments were offered on mountain goats; one respondent did not agree with the negative customary and traditional use finding for mountain goats in GMU 4 and one identified that it is a problem that the mountain goat season is closed before commercial fishing season is over, making it difficult for people to hunt for goats if they are occupied by commercial fishing. Bears were seen to be more numerous and more problematic in the past. Better bear hunting access and better bear control were offered as solutions.

Small Land Mammals/Furbearers

Only one comment was offered for this resource category and that respondent was concerned about new trappers depleting resources in certain areas.

Marine Mammals

Except for one comment about a perceived decline in the number of sightings of marine wildlife in 2013, all comments in this category were about sea otters. The sea otter population was seen as problematic due to its large size. Sea otters are held responsible for depleting important marine invertebrate species. While hunting of sea otter is allowed, many people felt there needed to be more hunting, either by allowing non-Natives to hunt, or by making the regulations clearer and less open to interpretation. Some respondents felt they had to talk to law enforcement before they hunted sea otters to make sure they would not get in trouble. Some respondents felt that enforcement of unclear regulations crossed the line into harassment of hunters.

Birds and Eggs

A few respondents brought up their concern about regulations on harvesting bird eggs. People used to harvest bird eggs from Saint Lazaria Island, but do not do it anymore because they are not sure about the regulations and do not want to get in trouble.⁸

Marine Invertebrates

The main concerns brought up about marine invertebrates dealt with sea otters or with paralytic shellfish poisoning (PSP). People noticed a decline in Dungeness crabs, king crabs, abalone, and razor clams, among other species. The loss of abalone especially was highlighted. Other residents felt there has been overfishing of the king crab stocks in Hoonah Sound, which hurt that population. A number of residents brought up their concerns of PSP in shellfish, with some households stating that they do not harvest shellfish anymore because they do not know what is safe to eat.⁹

Vegetation

Few residents commented on vegetation. One respondent noted that the time to pick seaweed had become more variable recently, trending earlier in the year, but she was not sure why. Another respondent was concerned that a local company was hiring people to pick berries in Sitka.

Regulations

Some residents commented generally on subsistence regulations, from the very broad comment of being concerned about fish and game management to more specific concerns. Some residents felt subsistence regulations are too permissive for some resources (the 30-hook limit for subsistence halibut was an example given) or too strict (e.g., sea otter hunting). Other residents commented that regulations concerning subsistence and personal use fishing and hunting are not clear or easy to access.

Continuity of Subsistence Rights

Several respondents brought up the importance of subsistence fishing and hunting to all residents of the city, and how integral it was to residents' way of life. People were concerned about losing subsistence rights, and especially concerned that Sitka maintain its rural status under federal regulations.¹⁰ Others talked about how

8. In the Southeast region, only residents of the communities of Hoonah, Craig, Hydaburg, and Yakutat are eligible to participate in the subsistence gathering of gull eggs (*Code of Federal Regulations*, Migratory Bird Subsistence Harvest in Alaska, title 50, sec. 92.5 [2016]).

9. Since the administration of this survey, the Sitka Tribe of Alaska has opened an environmental research lab that can test subsistence shellfish for toxins. The lab is part of the Southeast Alaska Tribal Toxins network, which was formed to monitor the threat of toxic shellfish and harmful algal blooms throughout Southeast Alaska. For more information, see: <http://www.seator.org/>.

10. Revised federal rules were published on September 30, 2015, simplifying the process by which a community is defined as rural or non-rural. The Federal Subsistence Board makes a determination of which communities are non-rural, based on a comprehensive approach that considers several relevant factors and relying heavily on the recommendations of the Subsistence Regional Advisory Councils. All other communities not defined as non-rural would therefore be considered rural (Subsistence Management Regulations for Public Lands in Alaska; Rural Determination Process, 80 Fed. Reg. 213 [Nov. 4, 2015], <https://www.gpo.gov/fdsys/pkg/FR-2015-11-04/>

it was getting harder to get wild foods. Sometimes the difficulties arise from the cost of fuel and equipment maintenance, sometimes from lack of access to boats, or due to excessive regulations, but also difficulties due to age, health, time, or living circumstances. Some respondents also felt there were less trade and sharing of subsistence resources.

Environmental

Several respondents brought up concerns with climate change causing changes in distribution of resources and affecting marine resources through harmful algal blooms. Other respondents commented on too much litter and plastics being put into the oceans and concerns they had about the effects of the Fukushima nuclear plant accident on subsistence resources.

CONCLUSION

Harvesting and using wild resources remains an integral part of life in Sitka. With an average household harvest of 465 lb and nearly 12 wild resources used on average by Sitka households, wild resources provide a significant contribution to the local food supply (Table 2-11). Comparing results from the Sitka comprehensive survey with comprehensive surveys done the previous year in 5 other communities in Southeast Alaska—Angoon, Haines, Hoonah, Hydaburg, and Whale Pass—highlights particular aspects of resource use in Sitka (Table 2-29). In terms of demography and economy, Sitka is quite different from the other communities, with a much larger population that has a significantly higher average household income. A higher percentage of adults are employed year-round and correspondingly Sitka households are employed more months of the year than other communities.

For some metrics on resource harvest and use, Sitka seems quite comparable to the other Southeast Alaska communities, but it also appears that there is a greater difference in characteristics among households within the community. In terms of similarities, the per capita harvest in pounds usable weight in Sitka was 175 lb; the estimated average for all rural Southeast Alaska communities in 2012 was 200 lb (Fall 2014). Compared to the other study communities in 2012, Sitka is toward the lower end of the range of per capita harvests, but still higher than Haines, for example. Considering average resources harvested and shared, Sitka is again at the lower end of the range, but is not substantially lower.

However, looking at the characteristics measuring productivity of the top 25% ranked households or the lowest ranked 50% of households, significant differences do seem to occur. At the high end of the range of results, the top 25% ranked Sitka households harvested nearly 85% of the harvest; Hoonah was closest to this with 77% of the harvest taken by the same proportion of households. Along the same lines, 14% of households harvested 70% of the Sitka harvest; again Hoonah comes closest to this measure with 19% of households responsible for 70% of the harvest. These percentages are substantially less than the 30% of households shown in other studies (Wolfe et al. 2010). On the other end, the per capita harvest by the lowest ranked 50% of households was 3 lb less than the next closest community of Haines with 7 lb per capita, and significantly less than the 61 lb per capita harvested by the same household group in Hydaburg.

Sitka is a large community with a more diverse population and broader economic base, so it is not too surprising that a more substantial difference would be seen between the top producing households and the lower ranked ones in Sitka than in the other recently surveyed Southeast Alaska communities. There is also the possibility that if the harvest of wild resources is becoming more difficult—because of increased fuel prices, poor economic conditions, cost of equipment, or conflict with a work schedule—harvesting may become more concentrated in those households that are more able to find the time and opportunity. In Sitka, as indicated in Table 2-23, of the households that provided a reason, 31% of households stated they got less resources overall because they were working/no time, followed by lack of effort, lending some support to the idea, but additional research would be warranted to better understand any changes in harvesting patterns.

pdf/2015-27994.pdf). The areas in Southeast Alaska considered non-rural under the new federal rules include the Juneau area and the Ketchikan area (excluding Saxman) (Subsistence Management Regulations for Public Lands in Alaska; Rural Determinations, Nonrural List, 80 Fed. Reg. 213 [Nov. 4, 2015], <https://www.gpo.gov/fdsys/pkg/FR-2015-11-04/pdf/2015-27996.pdf>).

Table 2-29.—Comparison of selected Southeast Alaska community study findings, Angoon, Haines, Hoonah, Hydaburg, and Whale Pass, 2012; and, Sitka, 2013

Category	2012					2013
	Angoon	Haines	Hoonah	Hydaburg	Whale Pass	Sitka
Demography						
Population	342.1	1,921.1	732.1	332.2	55.3	7,873.2
Percentage of population that is Alaska Native	89.5%	16.0%	63.9%	92.5%	0.0%	24.9%
Percentage of household heads born in Alaska	87.5%	18.6%	56.5%	65.8%	6.9%	30.3%
Average length of residency of household heads (year)	46.4	24.2	33.8	36.6	18.0	26.6
Cash economy						
Average number of months employed	6.9	7.1	7.8	3.7	6.1	10.5
Percentage of employed adults working year-round	38.7%	40.4%	41.9%	22.8%	20.4%	70.5%
Percentage of income from sources other than employment	35.1%	23.3%	31.0%	16.2%	30.4%	21.4%
Average household income ^a	\$25,688	\$61,796	\$51,389	\$37,113	\$41,768	\$75,157
Per capita income ^a	\$9,161	\$26,313	\$19,654	\$13,294	\$20,398	\$28,304
Resource harvest and use						
Per capita harvest, pounds usable weight	182.5	135.3	343.3	530.7	247.0	175.0
Average household harvest, pounds usable weight	511.6	317.8	897.7	1,481.6	505.8	464.6
Number of resources used by 50% or more households	11.0	8.0	11.0	19.0	7.0	13.0
Average number of resources used per household	14.2	12.7	17.8	21.3	11.8	11.8
Average number of resources attempted to be harvested per household	9.5	9.4	12.0	13.1	10.4	8.2
Average number of resources harvested per household	8.9	8.7	11.3	12.7	9.5	7.7
Average number of resources received per household	7.1	5.1	9.2	13.4	2.8	5.5
Average number of resources given away per household	5.4	3.0	7.8	11.2	2.1	4.1
Percentage of total harvest taken by top 25% ranked households	69.4%	76.4%	76.7%	65.9%	67.6%	84.8%
Percentage of households that harvested 70% of harvest	23.5%	19.7%	18.9%	27.1%	23.8%	14.2%
Per capita harvest by lowest ranked 50% of households	9.3	7.2	18.1	61.2	26.4	4.2
Percentage of total harvest taken by lowest ranked 50% of harvesting households	5.1%	5.3%	5.3%	11.5%	10.7%	2.4%
Average number of resources used by lowest ranked 50% of households	10.4	8.9	10.9	18.0	8.9	8.5
Average number of resources used by top 25% ranked households	22.2	18.6	31.7	28.6	19.0	18.4

Source ADF&G Division of Subsistence household surveys, 2014.

a. Includes income from sources other than employment.

ACKNOWLEDGMENTS

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REFERENCES CITED

- ADLWD (Alaska Department of Labor and Workforce Development)
n.d. *Population of Alaska by economic region, borough and census area, 2010–2013*. State of Alaska Department of Labor and Workforce Development, Research and Analysis Homepage: Population: Juneau. <http://laborstats.alaska.gov/pop/popest.htm>
- Alaska Department of Fish and Game
2012 *Alaska Department of Fish and Game staff comments on commercial, sport, subsistence, and personal use finfish regulatory proposals, Committee of the Whole and Committees A, B, C and D, for Southeast Alaska and Yakutat Finfish Management Areas; Alaska Board of Fisheries meeting, Ketchikan, Alaska, February 24–March 4, 2012*. Alaska Department of Fish and Game, Regional Information Report 1J12-01: Douglas, AK. <http://www.sf.adfg.state.ak.us/fedaidpdfs/RIR.1J.2012.01.pdf>
- Association of Canadian Universities for Northern Studies
2003 *Ethical principles for the conduct of research in the North*. The Association = L'Association: Ottawa. ISBN 0-921421-10-9
- Bickel, G., M. Nord, C. Price, W. Hamilton, and J. Cook
2000 *Guide to Measuring Household Food Security, Revised 2000*. U.S. Department of Agriculture, Food and Nutrition Service: Alexandria, VA.
- Coates, J.
2004 *Experience and expression of food security across cultures: practical implications for valid measurement*. Food and Nutrition Technical Assistance Project, FHI 360: Washington, D.C.
- Coates, J., E.A. Frongillo, B.L. Rogers, P. Webb, P.E. Wilde, and R. Houser
2006 *Commonalities in the experience of household food insecurity across cultures: what are measures missing?* Journal of Nutrition 136(5), page 1438S–1448S.
- Cochran, W.G.
1977 *Sampling techniques*, 3rd edition. John Wiley & Sons: New York.
- Coleman-Jensen, A., M. Nord, M. Andrews, and S. Carlson
2012 *Household food security in the United States, 2011*. U.S. Department of Agriculture, Economic Research Service, Economic Research Report No. 141: Washington, D.C. <http://www.ers.usda.gov/media/884525/err141.pdf>
- Dauenhauer, N., R. Dauenhauer, and L. Black, editors
2008 *Anóoshi lingít aani ká =: Russians in Tlingit America: the battles of Sitka, 1802 and 1804*, Volume 4 book in the Classics of Tlingit oral literature. University of Washington Press: Sealaska Heritage Institute: Seattle: Juneau [Alaska]. ISBN 978-0-295-98600-5
- Fall, J.A.
2014 *Subsistence in Alaska: a year 2012 update*. Alaska Department of Fish and Game Division of Subsistence: Anchorage. http://www.adfg.alaska.gov/static/home/subsistence/pdfs/subsistence_update_2012.pdf
- Frongillo, E.A. and S. Nanama
2006 *Development and validation of an experience-based measure of household food insecurity within and across seasons in northern Burkina Faso*. Journal of Nutrition 136(5), page 1409s–1419s.
- Gmelch, G. and S.B. Gmelch
1985 *Resource use in a small Alaskan city–Sitka*. Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 90: Juneau. <http://www.adfg.alaska.gov/techpap/tp090.pdf>
- Goldschmidt, W. and T.H. Haas
1998 *Haa aani = Our land: Tlingit and Haida land rights and use*. University of Washington Press; Sealaska Heritage Foundation: Seattle : Juneau. ISBN 0-295-97640-3

- Green, K., J. Stahl, M. Vaughn, K. Carroll, and A. Baldwin
2014 *Annual management report for the Southeast and Yakutat commercial groundfish fisheries, 2014*. Alaska Department of Fish and Game Divisions of Sport Fish and Commercial Fisheries, Fishery Management Report No. 14-57: Anchorage. <http://www.adfg.alaska.gov/FedAidPDFs/FMR14-57.pdf>
- Himes-Cornell, A.K., K. Hoelting, C. Maguire, L. Munger-Little, J. Lee, J. Fisk, R. Felthoven, C. Geller, and P. Little
2013 *Community profiles for North Pacific Fisheries - Alaska*, National Oceanic and Atmospheric Administration (NOAA) Technical Memorandum NMFS-AFSC-259, Volume 11. U.S. Department of Commerce: Seattle, WA. <https://www.afsc.noaa.gov/Publications/AFSC-TM/NOAA-TM-AFSC-259/VOLUME%2011.pdf>
- Jones, B. and M.L. Kostick, editors
2016 *The harvest and use of wild resources in Nikiski, Seldovia, Nanwalek, and Port Graham, Alaska, 2014*. Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 420: Anchorage. <http://www.adfg.alaska.gov/techpap/TP420.pdf>
- Melgar-Quinonez, H.R., A.C. Zubieta, B. McNelly, A. Nteziyaremye, M.F.D. Gerardo, and C. Dunford
2006 *Household Food Insecurity and Food Expenditure in Bolivia, Burkina Faso, and the Philippines*. Journal of Nutrition 136(5), page 1431S–1437S.
- Mooney, P.W.
2015 “Chapter 6: Unit 4 deer—Admiralty, Baranof, Chichagof, and adjacent islands” [in] P. Harper and L.A. McCarthy, editors *Deer management report of survey and inventory activities 1 July 2012–30 June 2014*. Alaska Department of Fish and Game Division of Wildlife Conservation, Species Management Report ADF&G/DWC/SMR-2015-3: Juneau. http://www.adfg.alaska.gov/static/research/wildlife/speciesmanagementreports/pdfs/deer_smr_2015_3_chapter_6_unit_4.pdf
- Naves, L.C., M.F. Turek, and W.E. Simeone
2010 *Subsistence—personal use salmon harvest, Southeast—Yakutat Management Region, 1996–2006*. Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 350: Anchorage. <http://www.adfg.alaska.gov/techpap/TP350.pdf>
- Nord, M., M. Andrews, and S. Carlson
2008 *Household food security in the United States, 2007*. Department of Agriculture, Economic Research Service, ERR-66: Washington, D.C.
- Pérez-Escamilla, R., A.M. Segall-Corrêa, L.K. Maranhã, M. de F.A. Sampaio, L. Marín-León, and G. Panigassi
2004 *An adapted version of the U.S. Department of Agriculture food insecurity module is a valid tool for assessing household food insecurity in Campinas, Brazil*. Journal of Nutrition 134(8), pages 1923–1928.
- Sill, L.A. and D. Koster, editors
2017 *The harvest and use of wild resources in Haines, Hoonah, Angoon, Whale Pass, and Hydaburg, Alaska, 2012*. Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 399: Douglas. <http://www.adfg.alaska.gov/techpap/TP399.pdf>
- Swindale, A. and P. Bilinsky
2006 *Development of a universally applicable household food insecurity measurement tool: process, current status, and outstanding issues*. Journal of Nutrition 136(5), page 1449S–1452S.
- U.S. Census Bureau
n.d. *2010 Decennial Census and American Community Survey data*. U.S. Census Bureau American FactFinder Homepage: Washington, D.C. <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>
2011 *2010 census*. U.S. Census Bureau: Washington, D.C. <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>
- Webb, P., J. Coates, E.A. Frongillo, B.L. Rogers, A. Swindale, and P. Bilinsky
2006. *Measuring household food insecurity: why it's so important and yet so difficult to do*. Journal of Nutrition 136(5), page 1404s–1408s.

Wolfe, R.J.

1987 *The super-household: specialization in subsistence economies*. Paper presented at the 14th annual meeting of the Alaska Anthropological Association, March 1987, Anchorage, Alaska. Alaska Department of Fish and Game Division of Subsistence: Juneau.

Wolfe, R.J., C.L. Scott, W.E. Simeone, C.J. Utermohle, and M.C. Pete

2010 *The "super-household" in Alaska Native subsistence economies*. Final Report to the National Science Foundation, Project ARC 0352611.

Wunderlich, G.S. and J.L. Norwood

2006 *Food insecurity and hunger in the United States: an assessment of the measure. Panel to review the U.S. Department of Agriculture's measurement of food insecurity and hunger*. Committee on National Statistics, Division of Behavioral and Social Sciences and Education, the National Academies Press: Washington, D.C.

APPENDIX A–SURVEY FORM

COMPREHENSIVE WILD FOOD HARVEST SURVEY

SITKA, ALASKA

February to January, 2013

This survey is used to estimate harvests of wild foods and to describe community subsistence economies. We will publish a summary report, and send it to all households in your community. We share community information with the Alaska Department of Fish and Game, the U.S. Fish and Wildlife Service and the National Park Service. We work with the federal Regional Advisory Councils and with local Fish and Game Advisory Committees to better manage subsistence and to implement federal and state subsistence priorities.

We will NOT identify your household. We will NOT use this information for enforcement. Participation in this survey is voluntary. Even if you agree to be surveyed, you may stop at any time.

HOUSEHOLD ID:		
COMMUNITY ID:	SITKA	313
STRATA GROUP:		
RESPONDENT ID:		
INTERVIEWER:		
INTERVIEW DATE:		
START TIME:		
STOP TIME:		
	DATA CODED BY:	
	DATA ENTERED BY:	
	SUPERVISOR:	



COOPERATING ORGANIZATIONS

DIVISION OF SUBSISTENCE
ALASKA DEPT OF FISH & GAME
1255 W 8TH STREET
JUNEAU, AK 99801

907-465-3617

SITKA TRIBE OF ALASKA
429 KATLIAN STREET
SITKA, AK 99835

907-747-7168

HOUSEHOLD MEMBERS

HOUSEHOLD ID

Between FEBRUARY 2013, and JANUARY 2014...
...who lived in your household?

ID#	IS THIS PERSON ANSWERING QUESTIONS ON THIS SURVEY? <i>(circle)</i>	MALE OR FEMALE? <i>(circle)</i>	ALASKA NATIVE? <i>(circle)</i>	IN WHAT YEAR WAS THIS PERSON BORN? <i>(year)</i>	WHERE WERE PARENTS LIVING WHEN THIS PERSON WAS BORN? <i>(ak city or state)</i>	HOW IS THIS PERSON RELATED TO HOUSEHOLD HEAD 1? <i>(relation)</i>	HOW MANY YEARS HAS THIS PERSON LIVED IN SITKA? <i>(number)</i>
HEAD 1 01	Y N	M F	Y N				YRS
Enter spouse or partner next. If household has a SINGLE HEAD, leave HEAD 2 blank.							
HEAD 2 02	Y N	M F	Y N				YRS
Enter children (oldest to youngest), grandchildren, grandparents, brothers, sisters, or anyone else living full-time in this household.							
03	Y N	M F	Y N				YRS
04	Y N	M F	Y N				YRS
05	Y N	M F	Y N				YRS
06	Y N	M F	Y N				YRS
07	Y N	M F	Y N				YRS
08	Y N	M F	Y N				YRS
09	Y N	M F	Y N				YRS
10	Y N	M F	Y N				YRS
11	Y N	M F	Y N				YRS
12	Y N	M F	Y N				YRS
13	Y N	M F	Y N				YRS
14	Y N	M F	Y N				YRS
15	Y N	M F	Y N				YRS

PERMANENT HH MEMBERS: 01

SITKA: 313

HOUSEHOLD MEMBER PARTICIPATION

HOUSEHOLD ID

Between FEBRUARY 2013, and JANUARY 2014...

...did this person...

PERSON	Fish		Large Land Mammals		Marine Mammals		Small Land Mammals Furbearers		Birds & Eggs		Plants/Berries/Wood	
ID# FROM	Fish	Process	Hunt	Process	Hunt	Process	Hunt/Trap	Process	Hunt/Gather	Process	Gather	Process
Page 2	(circle)	(circle)	(circle)	(circle)	(circle)	(circle)	(circle)	(circle)	(circle)	(circle)	(circle)	(circle)
Head 1	Y N	Y N	Y N	Y N	Y N	Y N	Y N	Y N	Y N	Y N	Y N	Y N
Head 2	Y N	Y N	Y N	Y N	Y N	Y N	Y N	Y N	Y N	Y N	Y N	Y N
03	Y N	Y N	Y N	Y N	Y N	Y N	Y N	Y N	Y N	Y N	Y N	Y N
04	Y N	Y N	Y N	Y N	Y N	Y N	Y N	Y N	Y N	Y N	Y N	Y N
05	Y N	Y N	Y N	Y N	Y N	Y N	Y N	Y N	Y N	Y N	Y N	Y N
06	Y N	Y N	Y N	Y N	Y N	Y N	Y N	Y N	Y N	Y N	Y N	Y N
07	Y N	Y N	Y N	Y N	Y N	Y N	Y N	Y N	Y N	Y N	Y N	Y N
08	Y N	Y N	Y N	Y N	Y N	Y N	Y N	Y N	Y N	Y N	Y N	Y N
09	Y N	Y N	Y N	Y N	Y N	Y N	Y N	Y N	Y N	Y N	Y N	Y N
10	Y N	Y N	Y N	Y N	Y N	Y N	Y N	Y N	Y N	Y N	Y N	Y N
11	Y N	Y N	Y N	Y N	Y N	Y N	Y N	Y N	Y N	Y N	Y N	Y N
12	Y N	Y N	Y N	Y N	Y N	Y N	Y N	Y N	Y N	Y N	Y N	Y N
13	Y N	Y N	Y N	Y N	Y N	Y N	Y N	Y N	Y N	Y N	Y N	Y N
14	Y N	Y N	Y N	Y N	Y N	Y N	Y N	Y N	Y N	Y N	Y N	Y N
15	Y N	Y N	Y N	Y N	Y N	Y N	Y N	Y N	Y N	Y N	Y N	Y N

PERMANENT HH MEMBERS: 01

SITKA: 313

FISHERY PARTICIPATION

HOUSEHOLD ID

SALMON

Do members of your household USUALLY fish for SALMON for subsistence?..... Y N

If YES, continue this section. If NO go to PARTICIPATION questions below...

Last year, did your household get a subsistence salmon permit?..... Y N

If YES

...how many members of your household were listed on the permit?..... (#)

...were there other people outside of your household listed on the permit?..... Y N

...if yes how many people besides those in your household were listed on the permit?..... (#)

If NO

...were you listed on another household's permit?..... Y N

Does your household own a gill net or beach seine for harvesting salmon?..... Y N

If YES

...did you share your net with another household?..... Y N

... if yes how many other households?..... (#)

Does your household use the same location each year to harvest salmon?..... Y N

If yes, how long has your family used your current fishing location?..... (#)

If no, why has this changed over time?

PARTICIPATION IN FISHERIES AND COMMUNITY

Does your household own a boat?..... Y N

If YES

...what size is it?.....

...is your boat for commercial fishing?..... Y N

What are the top 3 most important fish eaten in your household?

1

2

3

Has a member of your household **ever** participated in a commercial fishery?..... Y NDoes the household member **currently** participate in a commercial fishery?

Y N

If no longer participating, why not?

How much of your household income comes from commercial fishing?

0%

1-25%

26-50%

50-75%

76-100%

0

1

2

3

4

HARVESTS: COMMERCIAL SALMON FISHING

HOUSEHOLD ID

Do members of your household USUALLY participate in COMMERCIAL SALMON FISHING ?..... Y N

Between FEBRUARY 2013, and JANUARY 2014...

...Did members of your household participate in commercial salmon fishing?..... Y N

IF NO, go to the next harvest page.

If YES, continue on this page...

Please estimate the number of salmon ALL MEMBERS OF YOUR HOUSEHOLD REMOVED FROM COMMERCIAL HARVEST FOR PERSONAL USE OR SHARING in 2013. INCLUDE the fish you gave away, ate fresh, fed to dogs, lost to spoilage, caught as incidental catch while fishing for another species, or got by helping others. If harvested with others, report ONLY YOUR SHARE of the catch.

	IN 2013 DID MEMBERS OF YOUR HH...		IN 2013, HOW MANY WERE REMOVED FOR YOUR OWN USE? (number)	IN 2013, HOW MANY DID YOU REMOVE FROM THE CATCH & GIVE AWAY TO CREW OR OTHERS?		ID NUMBER FROM PAGE 2	
	COMMERCIAL FISH FOR _____ (circle)	CATCH AS INCIDENTAL CATCH _____ (circle)		CREW	OTHERS	PERMIT HOLDER	CREW
CHINOOK (KING) SALMON 113000000	Y N	Y N	IND	IND	IND		
SOCKEYE (RED) SALMON 115000000	Y N	Y N	IND	IND	IND		
COHO (SILVER) SALMON 112000000	Y N	Y N	IND	IND	IND		
PINK (HUMPIES) SALMON 114000000	Y N	Y N	IND	IND	IND		
CHUM (DOG) SALMON 111000000	Y N	Y N	IND	IND	IND		
	Y N	Y N	IND	IND	IND		
	Y N	Y N	IND	IND	IND		
	Y N	Y N	IND	IND	IND		
	Y N	Y N	IND	IND	IND		
	Y N	Y N	IND	IND	IND		
	Y N	Y N	IND	IND	IND		
	Y N	Y N	IND	IND	IND		

HARVESTS: COMMERCIAL NON-SALMON FISHING

HOUSEHOLD ID

Do members of your household USUALLY participate in COMMERCIAL NON-SALMON FISHING ?..... Y N

Between FEBRUARY 2013, and JANUARY 2014...

...Did members of your household participate in commercial non-salmon fishing?..... Y N

IF NO, go to the next harvest page.

if YES, continue on this page...

Please estimate the number of commercially harvested non-salmon fish ALL MEMBERS OF YOUR HOUSEHOLD REMOVED FROM COMMERCIAL HARVEST FOR PERSONAL USE OR SHARING in 2013. INCLUDE the fish you gave away, ate fresh, fed to dogs, lost to spoilage, caught as incidental catch while fishing for another species, or got by helping others. If harvested with others, report ONLY YOUR SHARE of the catch.

	IN 2013 DID MEMBERS OF YOUR HH...		IN 2013, HOW MANY _____ WERE REMOVED FOR YOUR OWN USE? (number)	IN 2013, HOW MANY _____ DID YOU REMOVE FROM THE CATCH & GIVE AWAY TO CREW OR OTHERS? CREW OTHERS (number) (number)		ID NUMBER FROM PAGE 2	
	COMMERCIAL FISH FOR _____ (circle)	CATCH AS INCIDENTAL CATCH _____ (circle)		PERMIT HOLDER (number)	CREW (number)		
HALIBUT	Y N	Y N	LBS	LBS	LBS		
121800000							
BLACK ROCKFISH	Y N	Y N	IND	IND	IND		
122602000							
YELLOW EYE ROCKFISH <i>Red Snapper</i>	Y N	Y N	IND	IND	IND		
122606000							
PACIFIC COD	Y N	Y N	IND	IND	IND		
121004000							
TOM COD	Y N	Y N	IND	IND	IND		
121008000							
SABLEFISH <i>Black Cod</i>	Y N	Y N	IND	IND	IND		
122800000							
FLOUNDER	Y N	Y N	IND	IND	IND		
121400000							
LINGCOD	Y N	Y N	IND	IND	IND		
121606000							
HERRING	Y N	Y N	IND	IND	IND		
120200000							
HERRING SAC ROE	Y N	Y N	IND	IND	IND		
120304000							
HERRING SPAWN ON KELP <i>Daaw</i>	Y N	Y N	GAL	GAL	GAL		
120306000							
	Y N	Y N	IND	IND	IND		

HARVESTS: COMMERCIAL MARINE INVERTEBRATE HARVEST

HOUSEHOLD ID

Do members of your household USUALLY participate in COMMERCIAL MARINE INVERTEBRATE HARVEST ?..... Y N

Between FEBRUARY 2013, and JANUARY 2014...

...Did members of your household participate in commercial marine invertebrate harvest?..... Y N

IF NO, go to the next harvest page.

If YES, continue on this page...

Please estimate the commercially harvested marine invertebrates ALL MEMBERS OF YOUR HOUSEHOLD REMOVED FROM COMMERCIAL HARVEST in 2013. INCLUDE the marine invertebrates you gave away, ate fresh, fed to dogs, lost to spoilage, caught as incidental catch while fishing for another species, or got by helping others. If harvested with others, report ONLY YOUR SHARE of the catch.

	IN 2013 DID MEMBERS OF YOUR HH...		IN 2013, HOW MANY WERE REMOVED FOR YOUR OWN USE? (number)	IN 2013, HOW MANY DID YOU REMOVE FROM THE CATCH & GIVE AWAY TO CREW OR OTHERS?		ID NUMBER FROM PAGE 2	
	COMMERCIAL FISH FOR _____ (circle)	CATCH AS INCIDENTAL CATCH _____ (circle)		CREW	OTHERS	PERMIT HOLDER (number)	CREW (number)
DUNGENESS CRAB	Y N	Y N	IND	IND	IND		
501004000							
RED KING CRAB	Y N	Y N	IND	IND	IND		
501008080							
BROWN KING CRAB	Y N	Y N	IND	IND	IND		
501008040							
BLUE KING CRAB	Y N	Y N	GAL	GAL	GAL		
501008020							
TANNER CRAB	Y N	Y N	IND	IND	IND		
501012020							
SHRIMP	Y N	Y N	LBS	LBS	LBS		
503400000							
SEA CUCUMBER Yein	Y N	Y N	LBS	LBS	LBS		
503004000							
GEODUCKS	Y N	Y N	GAL	GAL	GAL		
501200000							
WEATHERVANE SCALLOPS	Y N	Y N	GAL	GAL	GAL		
502602000							
RED SEA URCHIN	Y N	Y N	GAL	GAL	GAL		
503204000							
OCTOPUS	Y N	Y N	LBS	LBS	LBS		
502200000							
	Y N	Y N					

During the last year, did your household fish COMMERCIALLY for any other kind of fish or seaweed?..... Y N

IF YES, enter the name in a blank row above, and answer the questions in that row.

COMMERCIAL MARINE INVERTEBRATE HARVEST: 03

SITKA: 313

HARVESTS: SALMON

(NON-COMMERCIAL)

HOUSEHOLD ID

Do members of your household USUALLY harvest SALMON non-commercially ?.....Y N

Between FEBRUARY 2013, and JANUARY 2014...

...Did members of your household USE or TRY TO HARVEST salmon?.....Y N

IF NO to both questions, go to the next harvest page.

If YES, continue on this page...

Please estimate how many salmon ALL MEMBERS OF YOUR HOUSEHOLD HARVESTED in 2013, including with a rod and reel. INCLUDE salmon you gave away, ate fresh, fed to dogs, lost to spoilage, or got by helping others. If fishing with others, report ONLY YOUR SHARE of the catch. Do not include fish caught and released.

	IN 2013 DID MEMBERS OF YOUR HH...					IN 2013, HOW MANY _____ DID YOUR HOUSEHOLD...					UNITS
	USE?	TRY TO HARVEST?	HARVEST?	RECEIVE?	GIVE AWAY?	...HARVEST WITH A GILL NET OR SEINE?	...HARVEST WITH A DIPNET	...HARVEST BY TROLLING?	...HARVEST WITH ROD AND REEL?	...HARVEST WITH OTHER GEAR?	
	(circle)					(number taken by each gear type)					
CHINOOK (KING) SALMON	Y N	Y N	Y N	Y N	Y N						IND
113000000											
SOCKEYE (RED) SALMON	Y N	Y N	Y N	Y N	Y N						IND
115000000											
COHO (SILVER) SALMON	Y N	Y N	Y N	Y N	Y N						IND
112000000											
PINK (HUMPIES) SALMON	Y N	Y N	Y N	Y N	Y N						IND
114000000											
CHUM (DOG) SALMON	Y N	Y N	Y N	Y N	Y N						IND
111000000											
UNKNOWN SALMON	Y N	Y N	Y N	Y N	Y N						IND
119000000											

These columns should include all the harvests: salmon HARVESTED by members of this household in 2013.

ASSESSMENTS: SALMON

Between FEBRUARY 2013, and JANUARY 2014...

To conclude our salmon section, I am going to ask a few general questions about salmon.

Last year...

...did your household use LESS, SAME, or MORE salmon than in recent years?..... X L S M

If LESS or MORE...

X = do not use

WHY was your use different?.....

1

2

Last year...

...did your household GET ENOUGH salmon?..... Y N

If NO...

What KIND of salmon did you need?.....

How would you describe the impact to your household

of not getting enough salmon last year?.....

...minor?

(1)

...major?

(2)

severe?

(3)

Did your household do anything DIFFERENTLY because you did NOT get enough salmon?..... Y N

IF YES...

What did your household do differently?.....

1

2

SALMON :04

SITKA: 313

125

HARVESTS: OTHER FISH

(NON-COMMERCIAL)

HOUSEHOLD ID

Do members of your household USUALLY harvest OTHER FISH ?..... Y N

Between FEBRUARY 2013, and JANUARY 2014...

...Did members of your household USE or TRY TO HARVEST other fish?.....Y N

If NO to both questions, go to the next harvest page.

If YES, continue on this page...

Please estimate how many other fish ALL MEMBERS OF YOUR HOUSEHOLD HARVESTED in 2013, including with a rod and reel. INCLUDE other fish you gave away, ate fresh, fed to dogs, lost to spoilage, or got by helping others. If fishing with others, report ONLY YOUR SHARE of the catch. Do not include fish caught and released

	IN 2013 DID MEMBERS OF YOUR HH...					IN 2013, HOW MANY _____ DID YOUR HOUSEHOLD...				UNITS
	USE?	TRY TO HARVEST?	HARVEST?	RECEIVE?	GIVE AWAY?	...HARVEST WITH GILL NET OR SEINE?	...HARVEST WITH ROD AND REEL?	... HARVEST WITH LONGLINE OR SKATE?	... HARVEST WITH OTHER GEAR?	
	(circle)					(number taken by each gear type)				
BLACK ROCKFISH 122602000	Y N	Y N	Y N	Y N	Y N					LBS
YELLOWWEY ROCKFISH Red Snapper 122606000	Y N	Y N	Y N	Y N	Y N					IND
SABLEFISH Black Cod 122800000	Y N	Y N	Y N	Y N	Y N					IND
PACIFIC COD 121004000	Y N	Y N	Y N	Y N	Y N					IND
TOM COD 121008000	Y N	Y N	Y N	Y N	Y N					IND
FLOUNDER 121400000	Y N	Y N	Y N	Y N	Y N					IND
SOLE 123600000	Y N	Y N	Y N	Y N	Y N					IND
LINGCOD 121606000	Y N	Y N	Y N	Y N	Y N					IND
BUFFALO SCULPIN 123002000	Y N	Y N	Y N	Y N	Y N					IND
RED IRISH LORD 123006020	Y N	Y N	Y N	Y N	Y N					IND
SHARK 123200000	Y N	Y N	Y N	Y N	Y N					IND
	Y N	Y N	Y N	Y N	Y N					IND

Continue on next page

These columns should include all the harvests:
other fish HARVESTED by members of this
household in 2013.

OTHER FISH: 06

SITKA: 313

HARVESTS: OTHER FISH
(NON-COMMERCIAL)

HOUSEHOLD ID

DO#

...continued

Please estimate how many other fish ALL MEMBERS OF YOUR HOUSEHOLD HARVESTED in 2013, including with a rod and reel. INCLUDE other fish you gave away, ate fresh, fed to dogs, lost to spoilage, or got by helping others. If fishing with others, report ONLY YOUR SHARE of the catch. Do not include fish caught and released

	IN 2013 DID MEMBERS OF YOUR HH...					IN 2013, HOW MANY _____ DID YOUR HOUSEHOLD...			UNITS (ind, lbs)
	USE?	TRY TO HARVEST?	HARVEST?	RECEIVE?	GIVE AWAY?	...HARVEST WITH GILL NET OR SEINE?	...HARVEST WITH ROD AND REEL?	...HARVEST WITH OTHER GEAR?	
SKATES	Y N	Y N	Y N	Y N	Y N				IND
123400000									
HERRING	Y N	Y N	Y N	Y N	Y N				GAL
120200000									
HERRING EGGS ON BRANCHES <i>Haaw</i>	Y N	Y N	Y N	Y N	Y N				GAL
120310000									
HERRING SPAWN ON KELP <i>Daaw</i>	Y N	Y N	Y N	Y N	Y N				GAL
120306000									
HERRING EGGS ON HAIR SEAWEED <i>Né</i>	Y N	Y N	Y N	Y N	Y N				GAL
120308000									
HERRING EGGS ON OTHER	Y N	Y N	Y N	Y N	Y N				GAL
120302000									
HOOLIGAN	Y N	Y N	Y N	Y N	Y N				GAL
120404000									
SILVER SMELT	Y N	Y N	Y N	Y N	Y N				GAL
120410000									
DOLLY VARDEN	Y N	Y N	Y N	Y N	Y N				IND
125006000									
RAINBOW TROUT	Y N	Y N	Y N	Y N	Y N				IND
126204000									
CUTTHROAT TROUT	Y N	Y N	Y N	Y N	Y N				IND
126202000									
STEELHEAD	Y N	Y N	Y N	Y N	Y N				IND
126206000									
	Y N	Y N	Y N	Y N	Y N				IND
	Y N	Y N	Y N	Y N	Y N				IND

Continue on next page

These columns should include all the harvests:
other fish HARVESTED by members of this
household in 2013.

During the last year, did your household use any other kind of other fish?..... Y N
IF YES, enter the name in a blank row above, and answer the questions in that row.

...continued

Between FEBRUARY 2013, and JANUARY 2014...

Last year...

...did your household use LESS, SAME, or MORE herring eggs than in recent years?..... X L S M ☐

If LESS or MORE... X = do not use

WHY was your use different?.....

1 ☐2 ☐

Last year...

...did your household GET ENOUGH herring eggs?..... Y N ☐

...where did your herring eggs come from?

Harvested them

Received from boat at docks

Friend or family

(Circle all that apply)

Last year...

...did your household use LESS, SAME, or MORE rockfish than in recent years?..... X L S M ☐

If LESS or MORE... X = do not use

WHY was your use different?.....

1 ☐2 ☐

To conclude our other fish section, I am going to ask a few general questions about other fish.

Last year...

...did your household use LESS, SAME, or MORE other fish than in recent years?..... X L S M ☐

If LESS or MORE... X = do not use

WHY was your use different?.....

1 ☐2 ☐

Last year...

...did your household GET ENOUGH other fish?..... Y N ☐

If NO...

What KIND of other fish did you need?.....

How would you describe the impact to your household

of not getting enough other fish last year?.....

...minor?

...major?

severe?

(1)

(2)

(3)

Did your household do anything DIFFERENTLY because you did NOT get enough other fish?.....

Y N ☐

IF YES...

What did your household do differently?.....

1 ☐2 ☐

HARVESTS: MARINE INVERTEBRATES/SHELLFISH

HOUSEHOLD ID

Do members of your household USUALLY harvest MARINE INVERTEBRATES/SHELLFISH ?.....Y N

Between FEBRUARY 2013, and JANUARY 2014...

...Did members of your household USE or TRY TO HARVEST marine invertebrates/shellfish ?.....Y N

If NO to both questions, go to the next harvest page.

If YES, continue on this page...

Please estimate how many marine invertebrates/shellfish ALL MEMBERS OF YOUR HOUSEHOLD HARVESTED in 2013. INCLUDE marine invertebrates/shellfish you gave away, ate fresh, fed to dogs, lost to spoilage, or got by helping others. If fishing with others, report ONLY YOUR SHARE of the catch.

	IN 2013 DID MEMBERS OF YOUR HH...					IN 2013, HOW MANY _____ DID YOUR HOUSEHOLD HARVEST? (number taken)	UNITS (ind, lbs, gal)
	USE?	TRY TO HARVEST?	HARVEST?	RECEIVE?	GIVE AWAY?		
	(circle)						
DUNGENESS CRAB	Y N	Y N	Y N	Y N	Y N		IND
501004000							
RED KING CRAB	Y N	Y N	Y N	Y N	Y N		IND
501008080							
BROWN KING CRAB	Y N	Y N	Y N	Y N	Y N		IND
501008040							
BLUE KING CRAB	Y N	Y N	Y N	Y N	Y N		IND
501008020							
TANNER CRAB	Y N	Y N	Y N	Y N	Y N		IND
501012020							
ABALONE	Y N	Y N	Y N	Y N	Y N		GAL
500200000							
RED (LARGE) CHITONS <i>Lady Slippers</i>	Y N	Y N	Y N	Y N	Y N		GAL
500404000							
BLACK (SMALL) CHITONS <i>Gumboots</i>	Y N	Y N	Y N	Y N	Y N		GAL
500408000							
	Y N	Y N	Y N	Y N	Y N		
	Y N	Y N	Y N	Y N	Y N		
	Y N	Y N	Y N	Y N	Y N		
	Y N	Y N	Y N	Y N	Y N		

Continue on next page

These columns should include all the harvests:
marine invertebrates/shellfish HARVESTED by
members of this household in 2013.

HARVESTS: MARINE INVERTEBRATES/SHELLFISH

HOUSEHOLD ID

...continued

Please estimate how many marine invertebrates/shellfish ALL MEMBERS OF YOUR HOUSEHOLD HARVESTED in 2013. INCLUDE marine invertebrates/shellfish you gave away, ate fresh, fed to dogs, lost to spoilage, or got by helping others. If fishing with others, report ONLY YOUR SHARE of the catch.

	IN 2013 DID MEMBERS OF YOUR HH					IN 2013, HOW MANY _____ DID YOUR HOUSEHOLD HARVEST? <i>(number taken)</i>	UNITS <i>(ind, lbs, gal)</i>
	USE?	TRY TO HARVEST?	HARVEST?	RECEIVE?	GIVE AWAY?		
BUTTER CLAMS	Y N	Y N	Y N	Y N	Y N		GAL
500602000							
HORSE CLAMS (GAPER)	Y N	Y N	Y N	Y N	Y N		GAL
500606000							
LITTLENECK CLAMS <i>Steamers</i>	Y N	Y N	Y N	Y N	Y N		GAL
500608000							
RAZOR CLAMS	Y N	Y N	Y N	Y N	Y N		GAL
500612000							
GEODUCKS	Y N	Y N	Y N	Y N	Y N		GAL
501200000							
UNKNOWN CLAMS	Y N	Y N	Y N	Y N	Y N		GAL
500699000							
BASKET COCKLES	Y N	Y N	Y N	Y N	Y N		GAL
500802000							
HEART COCKLES	Y N	Y N	Y N	Y N	Y N		GAL
500804000							
LIMPETS <i>China Hats</i>	Y N	Y N	Y N	Y N	Y N		GAL
501800000							
MUSSELS	Y N	Y N	Y N	Y N	Y N		GAL
502000000							
WEATHERVANE SCALLOPS	Y N	Y N	Y N	Y N	Y N		GAL
502602000							
ROCK SCALLOPS	Y N	Y N	Y N	Y N	Y N		GAL
502604000							
SHRIMP	Y N	Y N	Y N	Y N	Y N		LBS
503400000							
	Y N	Y N	Y N	Y N	Y N		

Continue on next page

These columns should include all the harvests:
marine invertebrates/shellfish HARVESTED by
members of this household in 2013.

HARVESTS: MARINE INVERTEBRATES/SHELLFISH

HOUSEHOLD ID

...continued

Please estimate how many marine invertebrates/shellfish ALL MEMBERS OF YOUR HOUSEHOLD HARVESTED in 2013. INCLUDE marine invertebrates/shellfish you gave away, ate fresh, fed to dogs, lost to spoilage, or got by helping others. If fishing with others, report ONLY YOUR SHARE of the catch.

	IN 2013 DID MEMBERS OF YOUR HH					IN 2013, HOW MANY _____ DID YOUR HOUSEHOLD HARVEST? (number taken)	UNITS (ind, lbs, gal)
	USE?	TRY TO HARVEST?	HARVEST?	RECEIVE?	GIVE AWAY?		
OCTOPUS	Y N	Y N	Y N	Y N	Y N		LBS
502200000							
SQUID	Y N	Y N	Y N	Y N	Y N		LBS
503800000							
SEA CUCUMBER Yein	Y N	Y N	Y N	Y N	Y N		LBS
503004000							
GREEN SEA URCHIN	Y N	Y N	Y N	Y N	Y N		GAL
503202000							
RED SEA URCHIN	Y N	Y N	Y N	Y N	Y N		GAL
503204000							
PURPLE SEA URCHIN	Y N	Y N	Y N	Y N	Y N		GAL
503206000							

These columns should include all the harvests:
marine invertebrates/shellfish HARVESTED by
members of this household in 2013.

During the last year, did your household use any other kind of marine invertebrates/shellfish ?..... Y N

IF YES, enter the name in a blank row above, and answer the questions in that row.

MARINE INVERTEBRATES/SHELLFISH

Between FEBRUARY 2013, and JANUARY 2014...

To conclude our marine invertebrates/shellfish section, I am going to ask a few general questions about marine invertebrates/shellfish.

Last year...

...did your household use LESS, SAME, or MORE marine invertebrates/shellfish than in recent years?..... X L S M

If LESS or MORE...

X = do not use

WHY was your use different?.....

1

2

Last year...

...did your household GET ENOUGH marine invertebrates/shellfish?..... Y N

If NO...

What KIND of marine invertebrates/shellfish did you need?.....

How would you describe the impact to your household

of not getting enough marine invertebrates/shellfish last year?.....

...minor?
(1)

...major?
(2)

severe?
(3)

Did your household do anything DIFFERENTLY because you did NOT get enough marine invertebrates/shellfish?..... Y N

IF YES...

What did your household do differently?.....

1

2

HARVESTS: LARGE LAND MAMMALS

HOUSEHOLD ID

Do members of your household USUALLY hunt for LARGE LAND MAMMALS?.....Y N

Between FEBRUARY 2013, and JANUARY 2014...

...Did members of your household USE or TRY TO HARVEST large land mammals?.....Y N

IF NO to both questions, go to the next harvest page.

If YES, continue on this page...

Please estimate how many large land mammals ALL MEMBERS OF YOUR HOUSEHOLD HARVESTED in 2013. INCLUDE large land mammals you gave away, ate fresh, fed to dogs, lost to spoilage, or got by helping others. If hunting with others, report ONLY YOUR SHARE of the catch.

	IN 2013 DID MEMBERS OF YOUR HH...					IN 2013, HOW MANY _____ DID MEMBERS OF YOUR HOUSEHOLD HARVEST?												UNITS (ind)			
	USE?	TRY TO HARVEST?	HARVEST?	RECEIVE?	GIVE AWAY?	SEX	FEBRUARY	MARCH	APRIL	MAY	JUNE	JULY	AUGUST	SEPTEMBER	OCTOBER	NOVEMBER	DECEMBER		JANUARY	UNKNOWN	
DEER	Y N	Y N	Y N	Y N	Y N	(enter number by sex and month of take)															
211200000						M															IND
211200001						F															
211200002						?															
211200009						M															
BLACK BEAR	Y N	Y N	Y N	Y N	Y N	F															IND
210600000						?															
210600001						M															
210600002						F															
210600009						?															
BROWN BEAR	Y N	Y N	Y N	Y N	Y N	M															IND
210800000						F															
210800001						?															
210800002						M															IND
210800009						F															
GOAT	Y N	Y N	Y N	Y N	Y N	?															
211600000						M															IND
211600001						F															
211600002						?															
211600009						M															IND
MOOSE	Y N	Y N	Y N	Y N	Y N	F															
211800000						?															
211800001						M															IND
211800002						F															
211800009						?															
ELK	Y N	Y N	Y N	Y N	Y N	M															IND
211400000						F															
211400002						?															
211400001						M															IND
211400009						F															
						?															

Continue on next page

HOUSEHOLD ID

Please estimate how many large land mammals ALL MEMBERS OF YOUR HOUSEHOLD HARVESTED in 2013. INCLUDE large land mammals you gave away, ate fresh, fed to dogs, lost to spoilage, or got by helping others. If hunting with others, report ONLY YOUR SHARE of the catch.

[illegible]

LARGE LAND MAMMALS

Between FEBRUARY 2013, and JANUARY 2014...

To conclude our large land mammals section, I am going to ask a few general questions about large land mammals.

Last year...

...did your household use LESS, SAME, or MORE large land mammals than in recent years?..... X L S M

If LESS or MORE...

WHY was your use different?.....

$X = do\ not\ use$

1

2

Last year...

...did your household GET ENOUGH large land mammals? Y N

If NO...

What KIND of large land mammals did you need?.....

How would you describe the impact to your household

of not getting enough large land mammals last year?..... ..minor? ..major? severe?

(1) (2) (3)

Did your household do anything DIFFERENTLY because you did NOT get enough large land mammals?..... Y N

IF YES...

What did your household do differently?.....

1

2

HOUSEHOLD ID

	Y	N
1	1	1
2	1	1
3	1	1
4	1	1
5	1	1
6	1	1
7	1	1
8	1	1
9	1	1
10	1	1
11	1	1
12	1	1
13	1	1
14	1	1
15	1	1
16	1	1
17	1	1
18	1	1
19	1	1
20	1	1
21	1	1
22	1	1
23	1	1
24	1	1
25	1	1
26	1	1
27	1	1
28	1	1
29	1	1
30	1	1
31	1	1
32	1	1
33	1	1
34	1	1
35	1	1
36	1	1
37	1	1
38	1	1
39	1	1
40	1	1
41	1	1
42	1	1
43	1	1
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67	1	1
68	1	1
69	1	1
70	1	1
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75	1	1
76	1	1
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79	1	1
80	1	1
81	1	1
82	1	1
83	1	1
84	1	1
85	1	1
86	1	1
87	1	1
88	1	1
89	1	1
90	1	1
91	1	1
92	1	1
93	1	1
94	1	1
95	1	1
96	1	1
97	1	1
98	1	1
99	1	1
100	1	1

...Did members of your household USE or TRY TO HARVEST marine mammals?..... Y N

If YES, continue on this page...

	IN 2013 DID MEMBERS OF YOUR HH...					IN 2013, HOW MANY _____ DID MEMBERS OF YOUR HOUSEHOLD HARVEST?												UNITS	HOW MANY _____ WERE USED FOR HIDE ONLY?	WERE LESS, SAME, OR MORE _____ AVAILABLE IN 2013, THAN IN RECENT YEARS?			
	USE?	TRY TO HARVEST?	RECEIVE?	GIVE AWAY?	SEX	FEBRUARY	MARCH	APRIL	MAY	JUNE	JULY	AUGUST	SEPTEMBER	OCTOBER	NOVEMBER	DECEMBER	JANUARY				UNKNOWN		
	(circle)				(enter number by sex and month of take)												(ind)	(#)	(circle)				
HARBOR SEAL	Y	N	Y	N	Y	N	Y	N	Y	N	Y	N	Y	N	Y	N	Y	N	Y	N	IND		L S M ?
300806040																							
300806042																							
300806041																							
300806049																							
STELLER SEA LION	Y	N	Y	N	Y	N	Y	N	Y	N	Y	N	Y	N	Y	N	Y	N	Y	N	IND		L S M ?
301200000																							
301200002																							
301200001																							
301200009																							
SEA OTTER	Y	N	Y	N	Y	N	Y	N	Y	N	Y	N	Y	N	Y	N	Y	N	Y	N	IND		L S M ?
301000000																							
301000002																							
301000001																							
301000009																							
FUR SEAL	Y	N	Y	N	Y	N	Y	N	Y	N	Y	N	Y	N	Y	N	Y	N	Y	N	IND		L S M ?
300804000																							
300804001																							
300804002																							
300804009																							

" ? " means
"I don't know"

IF YES, enter the name in a blank row above, and answer the questions in that row.

Between FEBRUARY 2013, and JANUARY 2014...

Last year...

X L S M

$X = do\ not\ use$

1

Last year...

Y N

IF NO...

10/10/2014

...minor?
(1)

...major?
(2)

...severe?
(3)

Y

IF YES...

1

Between FEBRUARY 2013, and JANUARY 2014...

...WHERE did members of your household HUNT FOR marine mammals?

...WHERE did members of your household HARVEST marine mammals?

On MAP, mark all harvest locations for page subject.

Circle all search areas on MAP

HARVESTS: SMALL LAND MAMMALS OR FURBEARERS

HOUSEHOLD ID

Do members of your household USUALLY hunt or trap for SMALL LAND MAMMALS OR FURBEARERS for subsistence?..... Y N

Between FEBRUARY 2013, and JANUARY 2014...

...Did members of your household USE or TRY TO HARVEST small land mammals or furbearers?..... Y N

IF NO to both questions, go to the next harvest page.

If YES, continue on this page...

Please estimate how many small land mammals or furbearers ALL MEMBERS OF YOUR HOUSEHOLD HARVESTED in 2013. INCLUDE small land mammals or furbearers you gave away, ate fresh, fed to dogs, lost to spoilage, or got by helping others. If hunting or trapping with others, report ONLY YOUR SHARE of the catch.

	IN 2013 DID MEMBERS OF YOUR HH...					IN 2013, HOW MANY _____ DID MEMBERS OF YOUR HOUSEHOLD HARVEST?												HOW MANY WERE USED FOR FUR ONLY?	UNITS	
	USE?	TRY TO HARVEST?	HARVEST?	RECEIVE?	GIVE AWAY?	FEBRUARY	MARCH	APRIL	MAY	JUNE	JULY	AUGUST	SEPTEMBER	OCTOBER	NOVEMBER	DECEMBER	JANUARY			UNKNOWN
WOLF 223200000	Y N	Y N	Y N	Y N	Y N	(enter number by month of take)												(ind)	IND	
MARTEN 222000000	Y N	Y N	Y N	Y N	Y N	(enter number by month of take)												(ind)	IND	
WEASEL 223000000	Y N	Y N	Y N	Y N	Y N	(enter number by month of take)												(ind)	IND	
LAND OTTER 221200000	Y N	Y N	Y N	Y N	Y N	(enter number by month of take)												(ind)	IND	
LYNX 221600000	Y N	Y N	Y N	Y N	Y N	(enter number by month of take)												(ind)	IND	
MINK 222200000	Y N	Y N	Y N	Y N	Y N	(enter number by month of take)												(ind)	IND	
WOLVERINE 223400000	Y N	Y N	Y N	Y N	Y N	(enter number by month of take)												(ind)	IND	
RED FOX 220804000	Y N	Y N	Y N	Y N	Y N	(enter number by month of take)												(ind)	IND	
	Y N	Y N	Y N	Y N	Y N	(enter number by month of take)												(ind)	IND	
	Y N	Y N	Y N	Y N	Y N	(enter number by month of take)												(ind)	IND	

Continue on next page

SMALL LAND MAMMALS: 14

SITKA: 313

HARVESTS: SMALL LAND MAMMALS OR FURBEARERS

HOUSEHOLD ID

...continued

Please estimate how many small land mammals or furbearers ALL MEMBERS OF YOUR HOUSEHOLD HARVESTED in 2013. INCLUDE small land mammals or furbearers you gave away, ate fresh, fed to dogs, lost to spoilage, or got by helping others. If hunting or trapping with others, report ONLY YOUR SHARE of the catch.

	IN 2013 DID MEMBERS OF YOUR HH...					IN 2013, HOW MANY _____ DID MEMBERS OF YOUR HOUSEHOLD HARVEST?												HOW MANY WERE USED FOR FUR ONLY?	UNITS (ind)	
	USE?	TRY TO HARVEST?	HARVEST?	RECEIVE?	GIVE AWAY?	FEBRUARY	MARCH	APRIL	MAY	JUNE	JULY	AUGUST	SEPTEMBER	OCTOBER	NOVEMBER	DECEMBER	JANUARY			UNKNOWN
BEAVER	Y N	Y N	Y N	Y N	Y N															IND
220200000																				
COYOTE	Y N	Y N	Y N	Y N	Y N															IND
220400000																				
MARMOT	Y N	Y N	Y N	Y N	Y N															IND
221800000																				
MUSKRAT	Y N	Y N	Y N	Y N	Y N															IND
222400000																				
PORCUPINE	Y N	Y N	Y N	Y N	Y N															IND
222600000																				
SNOWSHOE HARE	Y N	Y N	Y N	Y N	Y N															IND
221004000																				
TREE SQUIRREL	Y N	Y N	Y N	Y N	Y N															IND
222804000																				
	Y N	Y N	Y N	Y N	Y N															IND

During the last year, did your household use any other kind of small land mammals?..... Y N

IF YES, enter the name in a blank row above, and answer the questions in that row.

SMALL LAND MAMMALS OR FURBEARERS

Between FEBRUARY 2013, and JANUARY 2014...

To conclude our small land mammals section, I am going to ask a few general questions about small land mammals.

Last year...

...did your household use LESS, SAME, or MORE small land mammals than in recent years?..... X L S M

If LESS or MORE...

X = do not use

WHY was your use different?.....

1

2

Last year...

...did your household GET ENOUGH small land mammals?..... Y N

If NO...

What KIND of small land mammals did you need?.....

How would you describe the impact to your household

of not getting enough small land mammals last year?.....

...minor?

...major?

severe?

(1)

(2)

(3)

SMALL LAND MAMMALS: 00

SITKA: 31

HARVESTS: BIRDS

HOUSEHOLD ID

Do members of your household USUALLY hunt for BIRDS?..... Y N

Between FEBRUARY 2013, and JANUARY 2014...

...Did members of your household USE or TRY TO HARVEST birds?..... Y N

IF NO to both questions, go to the next harvest page.

If YES, continue on this page...

Please estimate how many birds ALL MEMBERS OF YOUR HOUSEHOLD HARVESTED in 2013. INCLUDE birds you gave away, ate fresh, lost to spoilage, or got by helping others. If hunting with others, report ONLY YOUR SHARE of the catch.

	IN 2013 DID MEMBERS OF YOUR HH...					IN 2013, HOW MANY DID MEMBERS OF YOUR HOUSEHOLD ? (Number of birds)												
	USE?	TRY TO HARVEST?	HARVEST?	RECEIVE?	GIVE AWAY?	Winter			Spring			Summer		Fall		Winter		UNKNOWN
						JANUARY	FEBRUARY	MARCH	MAY	JUNE	JULY	AUGUST	SEPTEMBER	OCTOBER	NOVEMBER	DECEMBER		
MALLARD	Y N	Y N	Y N	Y N	Y N													
410214000																		
TEAL	Y N	Y N	Y N	Y N	Y N													
410232990																		
NORTHERN PINTAIL	Y N	Y N	Y N	Y N	Y N													
410220000																		
LONG-TAILED DUCK (OLDSQUAW) (Specify)	Y N	Y N	Y N	Y N	Y N													
410218000																		
GOLDENEYE	Y N	Y N	Y N	Y N	Y N													
410210990																		
SCAUP (BLUE-BILL)	Y N	Y N	Y N	Y N	Y N													
410226990																		
WIGEON	Y N	Y N	Y N	Y N	Y N													
410236020																		
OTHER DUCKS	Y N	Y N	Y N	Y N	Y N													
410299000																		
CANADA GOOSE	Y N	Y N	Y N	Y N	Y N													
410404990																		
WHITE-FRONTED GEESE	Y N	Y N	Y N	Y N	Y N													
410410000																		
OTHER GEESE	Y N	Y N	Y N	Y N	Y N													
410499000																		
SWAN	Y N	Y N	Y N	Y N	Y N													
410699000																		
CRANE	Y N	Y N	Y N	Y N	Y N													
410802000																		

During the last year, did your household use any other kind of birds?..... Y N

IF YES, enter the name in a blank row above, and answer the questions in that row.

BIRD EGGS: 15

SITKA: 313

HARVESTS: BIRDS (CONT...)

HOUSEHOLD ID

IF NO to both questions, go to the next harvest page.

If YES, continue on this page...

Please estimate how many birds (cont...) ALL MEMBERS OF YOUR HOUSEHOLD HARVESTED in 2013. INCLUDE birds (cont...) you gave away, ate fresh, lost to spoilage, or got by helping others. If hunting with others, report ONLY YOUR SHARE of the catch.

	IN 2013 DID MEMBERS OF YOUR HH...					IN 2013, HOW MANY _____ DID MEMBERS OF YOUR HOUSEHOLD HARVEST? (number of birds)													
	USE?	TRY TO HARVEST?	HARVEST?	RECEIVE?	GIVE AWAY?	Winter			Spring			Summer			Fall			Winter	UNKNOWN
						FEBRUARY	MARCH	APRIL	MAY	JUNE	JULY	AUGUST	SEPTEMBER	OCTOBER	NOVEMBER	DECEMBER	JANUARY		
PTARMIGAN	Y N	Y N	Y N	Y N	Y N														
421804000																			
GROUSE	Y N	Y N	Y N	Y N	Y N														
421802000																			
SEABIRDS	Y N	Y N	Y N	Y N	Y N														
411299000																			
BLACK OYSTERCATCHER	Y N	Y N	Y N	Y N	Y N														
411004000																			
LARGE SHOREBIRDS	Y N	Y N	Y N	Y N	Y N														
411099020																			
SMALL SHORBIRDS	Y N	Y N	Y N	Y N	Y N														
411099010																			
LOONS	Y N	Y N	Y N	Y N	Y N														
411216990																			

During the last year, did your household use any other kind of bird eggs?..... Y N

IF YES, enter the name in a blank row above, and answer the questions in that row.

OTHER BIRDS

Between FEBRUARY 2013, and JANUARY 2014...

To conclude our other birds section, I am going to ask a few general questions about other birds.

Last year...

...did your household use LESS, SAME, or MORE other birds than in recent years?..... X L S M

If LESS or MORE...

X = do not use

WHY was your use different?.....

1

2

Last year...

...did your household GET ENOUGH other birds?..... Y N

If NO...

What KIND of other birds did you need?.....

How would you describe the impact to your household

of not getting enough other birds last year?.....

...minor?

...major?

severe?

(1)

(2)

(3)

Did your household do anything DIFFERENTLY because you did NOT get enough other birds?..... Y N

IF YES...

What did your household do differently?.....

1

2

BIRD EGGS: 15

SITKA: 313

HARVESTS: BIRD EGGS

HOUSEHOLD ID

Do members of your household USUALLY look for BIRD EGGS?..... Y N

Between FEBRUARY 2013, and JANUARY 2014...

...Did members of your household USE or TRY TO GATHER bird eggs?..... Y N

IF NO to both questions, go to the next harvest page.

If YES, continue on this page...

Please estimate how many bird eggs ALL MEMBERS OF YOUR HOUSEHOLD HARVESTED in 2013. INCLUDE bird eggs you gave away, ate fresh, lost to spoilage, or got by helping others. If looking with others, report ONLY YOUR SHARE of the catch.

	IN 2013 DID MEMBERS OF YOUR HH...					IN 2013, HOW MANY _____ DID MEMBERS OF YOUR HOUSEHOLD ? (Number of birds)													
	USE?	TRY TO HARVEST?	HARVEST?	RECEIVE?	GIVE AWAY?	Winter			Spring			Summer		Fall		Winter		UNKNOWN	
						JANUARY	FEBRUARY	MARCH	MAY	JUNE	JULY	AUGUST	SEPTEMBER	OCTOBER	NOVEMBER	NOVEMBER	DECEMBER		
MALLARD EGGS	Y N	Y N	Y N	Y N	Y N														
430214000																			
DUCK EGGS	Y N	Y N	Y N	Y N	Y N														
430299000																			
CANADA GOOSE EGGS	Y N	Y N	Y N	Y N	Y N														
430404990																			
GOOSE EGGS	Y N	Y N	Y N	Y N	Y N														
430499000																			
SWAN EGGS	Y N	Y N	Y N	Y N	Y N														
430699000																			
CRANE EGGS	Y N	Y N	Y N	Y N	Y N														
430802000																			
PTARMIGAN EGGS	Y N	Y N	Y N	Y N	Y N														
431804990																			
GROUSE EGGS	Y N	Y N	Y N	Y N	Y N														
431802990																			
GLAUCOUS WINGED GULL EGGS	Y N	Y N	Y N	Y N	Y N														
431212040																			
TERN EGGS	Y N	Y N	Y N	Y N	Y N														
431226990																			
	Y N	Y N	Y N	Y N	Y N														
	Y N	Y N	Y N	Y N	Y N														
	Y N	Y N	Y N	Y N	Y N														

During the last year, did your household use any other kind of bird eggs?..... Y N

IF YES, enter the name in a blank row above, and answer the questions in that row.

BIRD EGGS: 15

SITKA: 313

HARVESTS: BIRD EGGS

HOUSEHOLD ID

Do members of your household USUALLY look for BIRD EGGS?.....Y N

Between FEBRUARY 2013, and JANUARY 2014...

...Did members of your household USE or TRY TO GATHER bird eggs?.....Y N

IF NO to both questions, go to the next harvest page.

If YES, continue on this page...

Please estimate how many bird eggs ALL MEMBERS OF YOUR HOUSEHOLD GATHERED in 2013. INCLUDE bird eggs you gave away, ate fresh, lost to spoilage, or got by helping others. If looking with others, report ONLY YOUR SHARE of the eggs.

	IN 2013 DID MEMBERS OF YOUR HH...					IN 2011, HOW MANY DID MEMBERS OF YOUR HOUSEHOLD HARVEST? (number)	UNITS/NOTES (each, gallons, buckets, etc.)
	USE?	TRY TO HARVEST?	HARVEST?	RECEIVE?	GIVE AWAY?		
	(circle)						
SEA BIRD EGGS	Y N	Y N	Y N	Y N	Y N		
431299000							
BLACK OYSTERCATCHER EGGS	Y N	Y N	Y N	Y N	Y N		
431004000							
LARGE SHOREBIRD EGGS	Y N	Y N	Y N	Y N	Y N		
431099020							
SMALL SHOREBIRD EGGS	Y N	Y N	Y N	Y N	Y N		
431099010							
LOON EGGS	Y N	Y N	Y N	Y N	Y N		
431216990							

During the last year, did your household use any other kind of bird eggs?.....Y N

IF YES, enter the name in a blank row above, and answer the questions in that row.

EGGS

Between FEBRUARY 2013, and JANUARY 2014...

To conclude our eggs section, I am going to ask a few general questions about resource name.

Last year...

...did your household use LESS, SAME, or MORE eggs than in recent years?.....X L S M

If LESS or MORE...

X = do not use

WHY was your use different?.....

1

2

Last year...

...did your household GET ENOUGH eggs?.....Y N

If NO...

What KIND of eggs did you need?.....

How would you describe the impact to your household

of not getting enough eggs last year?.....

...minor?

...major?

severe?

(1)

(2)

(3)

Did your household do anything DIFFERENTLY because you did NOT get enough eggs?.....

Y N

IF YES...

What did your household do differently?.....

1

2

BIRD EGGS: 15

SITKA: 313

HARVESTS: PLANTS AND BERRIES INCLUDING WOOD

HOUSEHOLD ID

Do members of your household USUALLY harvest PLANTS AND BERRIES INCLUDING WOOD?..... Y N

Between FEBRUARY 2013, and JANUARY 2014...

...Did members of your household USE or TRY TO HARVEST plants and berries including wood?..... Y N

IF NO to both questions, go to the next harvest page.

IF YES, continue on this page...

Please estimate how many plants and berries including wood ALL MEMBERS OF YOUR HOUSEHOLD HARVESTED in 2013. INCLUDE plants and berries including wood you gave away, ate fresh, lost to spoilage, or got by helping others. If harvesting with others, report ONLY YOUR SHARE of the catch.

	IN 2013 DID MEMBERS OF YOUR HH...						IN 2011, HOW MANY DID MEMBERS OF YOUR HOUSEHOLD HARVEST? (number)	UNIT S/NOTES (each, gallons, buckets, etc.)
	USE?	TRY TO HARVEST?	HARVEST?	RECEIVE?	GIVE AWAY?			
	(circle)							
BLUEBERRY	Y N	Y N	Y N	Y N	Y N			
601002000								
CLOUD BERRY	Y N	Y N	Y N	Y N	Y N			
601016000								
LOW BUSH CRANBERRY	Y N	Y N	Y N	Y N	Y N			
601004000								
HIGH BUSH CRANBERRY	Y N	Y N	Y N	Y N	Y N			
601006000								
CURRENTS	Y N	Y N	Y N	Y N	Y N			
601012000								
ELDERBERRY	Y N	Y N	Y N	Y N	Y N			
601008000								
GOOSEBERRY	Y N	Y N	Y N	Y N	Y N			
601010000								
HUCKLEBERRY	Y N	Y N	Y N	Y N	Y N			
601014000								
NAGOONBERRY	Y N	Y N	Y N	Y N	Y N			
601018000								
RASPBERRY	Y N	Y N	Y N	Y N	Y N			
601020000								
SALMONBERRY	Y N	Y N	Y N	Y N	Y N			
601022000								
SOAPBERRY	Y N	Y N	Y N	Y N	Y N			
601024000								
STRAWBERRY	Y N	Y N	Y N	Y N	Y N			
601026000								
THIMBLEBERRY	Y N	Y N	Y N	Y N	Y N			
601028000								
WATERMELON BERRY Twisted Stalk Berry	Y N	Y N	Y N	Y N	Y N			
601032000								

Continue on next page.

HARVESTS: PLANTS AND BERRIES INCLUDING WOOD

HOUSEHOLD ID

Do members of your household USUALLY harvest PLANTS AND BERRIES INCLUDING WOOD?..... Y N

Between FEBRUARY 2013, and JANUARY 2014...

...Did members of your household USE or TRY TO HARVEST plants and berries including wood?..... Y N

IF NO to both questions, go to the next harvest page.

If YES, continue on this page...

Please estimate how many plants and berries including wood ALL MEMBERS OF YOUR HOUSEHOLD HARVESTED in 2013. INCLUDE plants and berries including wood you gave away, ate fresh, lost to spoilage, or got by helping others. If harvesting with others, report ONLY YOUR SHARE of the catch.

	IN 2013 DID MEMBERS OF YOUR HH...					IN 2011, HOW MANY DID MEMBERS OF YOUR HOUSEHOLD HARVEST? (number)	UNITS/NOTES (each, gallons, buckets, etc.)
	USE?	TRY TO HARVEST?	HARVEST?	RECEIVE?	GIVE AWAY?		
	(circle)						
BEACH ASPARAGUS	Y N	Y N	Y N	Y N	Y N		
602002000							
GOOSE TONGUE	Y N	Y N	Y N	Y N	Y N		
602004000							
DEVILS CLUB	Y N	Y N	Y N	Y N	Y N		
602012000							
FIDDLEHEAD FERNS	Y N	Y N	Y N	Y N	Y N		
602014000							
HUDSON BAY TEA	Y N	Y N	Y N	Y N	Y N		
602018000							
INDIAN RICE	Y N	Y N	Y N	Y N	Y N		
602020000							
MINT	Y N	Y N	Y N	Y N	Y N		
602022000							
NETTLE	Y N	Y N	Y N	Y N	Y N		
602016000							
SALMONBERRY SHOOTS	Y N	Y N	Y N	Y N	Y N		
602024000							
SKUNK CABBAGE	Y N	Y N	Y N	Y N	Y N		
602026000							
SOURDOCK	Y N	Y N	Y N	Y N	Y N		
602028000							
SPRUCE TIPS	Y N	Y N	Y N	Y N	Y N		
602030000							
WILD CELERY	Y N	Y N	Y N	Y N	Y N		
602032000							
WILD PARSLEY	Y N	Y N	Y N	Y N	Y N		
602034000							
WILD ROSE HIPS	Y N	Y N	Y N	Y N	Y N		
602036000							

Continue on next page.

HARVESTS: PLANTS AND BERRIES INCLUDING WOOD

HOUSEHOLD ID

...continued

Please estimate how many plants and berries including wood ALL MEMBERS OF YOUR HOUSEHOLD HARVESTING in 2013. INCLUDE plants and berries including wood you gave away, ate fresh, lost to spoilage, or got by helping others. If harvesting with others, report ONLY YOUR SHARE of the harvest.

	IN 2013 DID MEMBERS OF YOUR HH...					IN 2013. HOW MANY DID MEMBERS OF YOUR HOUSEHOLD HARVEST? (number)	UNITS/NOTES (each, gallons, buckets, etc.)
	USE?	TRY TO HARVEST?	HARVEST?	RECEIVE?	GIVE AWAY?		
	(circle)						
WILD RHUBARB	Y N	Y N	Y N	Y N	Y N		
602006000							
WILD SWEET POTATO	Y N	Y N	Y N	Y N	Y N		
602008000							
UNKNOWN GREENS FROM LAND	Y N	Y N	Y N	Y N	Y N		
602048000							
UNKNOWN MUSHROOMS	Y N	Y N	Y N	Y N	Y N		
602040000							
WOOD (Firewood)	Y N	Y N	Y N	Y N	Y N		
604000000							
	Y N	Y N	Y N	Y N	Y N		
	Y N	Y N	Y N	Y N	Y N		
	Y N	Y N	Y N	Y N	Y N		
	Y N	Y N	Y N	Y N	Y N		

During the last year, did your household use any other kind of plants and berries?..... Y N

IF YES, enter the name in a blank row above, and answer the questions in that row.

PLANTS AND BERRIES

Between FEBRUARY 2013, and JANUARY 2014...

To conclude our plants and berries section, I am going to ask a few general questions about plants and berries.

Last year...

...did your household use LESS, SAME, or MORE plants and berries than in recent years?..... X L S M

If LESS or MORE...

X = do not use

WHY was your use different?.....

1

2

Last year...

...did your household GET ENOUGH plants and berries?..... Y N

If NO...

What KIND of plants and berries did you need?.....

How would you describe the impact to your household

of not getting enough plants and berries last year?.....

...minor? ...major? severe?

(1)

(2)

(3)

Did your household do anything DIFFERENTLY because you did NOT get enough plants and berries?..... Y N

IF YES...

What did your household do differently?.....

1

2

PLANTS AND BERRIES: 17

SITKA: 313

HARVESTS: SEAWEED

HOUSEHOLD ID

Do members of your household USUALLY harvest SEAWEED?..... Y N

Between FEBRUARY 2013, and JANUARY 2014...

...Did members of your household USE or TRY TO HARVEST seaweed?..... Y N

IF NO to both questions, go to the next harvest page.

If YES, continue on this page...

Please estimate how much seaweed ALL MEMBERS OF YOUR HOUSEHOLD HARVESTING in 2013. INCLUDE seaweed you gave away, ate fresh, lost to spoilage, or got by helping others. If harvesting with others, report ONLY YOUR SHARE of the harvest.

	IN 2013 DID MEMBERS OF YOUR HH...					IN 2013, HOW MUCH DID MEMBERS OF YOUR HOUSEHOLD HARVEST? (number)	IN 2013, HOW MUCH WAS USED FOR FERTILIZER ONLY? (number)	UNITS/NOTES (ea. Gal. bckt. Etc...)
	USE?	TRY TO HARVEST?	HARVEST?	RECEIVE?	GIVE AWAY?			
	(circle)							
BLACK SEAWEED	Y N	Y N	Y N	Y N	Y N			
603002000								
BULL KELP	Y N	Y N	Y N	Y N	Y N			
603004000								
RED SEAWEED	Y N	Y N	Y N	Y N	Y N			
603006000								
SEA RIBBONS	Y N	Y N	Y N	Y N	Y N			
603008000								
GIANT KELP (MACROCYSTIS)	Y N	Y N	Y N	Y N	Y N			
603010000								
ALARIA	Y N	Y N	Y N	Y N	Y N			
603012000								
UNKNOWN SEAWEED	Y N	Y N	Y N	Y N	Y N			
603099000								
	Y N	Y N	Y N	Y N	Y N			

During the last year, did your household use any other kind of seaweed?..... Y N

IF YES, enter the name in a blank row above, and answer the questions in that row.

SEAWEED

Between FEBRUARY 2013, and JANUARY 2014...

To conclude our seaweed section, I am going to ask a few general questions about seaweed.

Last year...

...did your household use LESS, SAME, or MORE seaweed than in recent years?..... X L S M

If LESS or MORE...

X = do not use

WHY was your use different?.....

1

2

Last year...

...did your household GET ENOUGH seaweed?..... Y N

If NO...

What KIND of seaweed did you need?.....

How would you describe the impact to your household

of not getting enough seaweed last year?.....

...minor? ...major? severe?

(1) (2) (3)

Did your household do anything DIFFERENTLY because you did NOT get enough seaweed?..... Y N

IF YES...

What did your household do differently?.....

1

2

(NON COMMERCIAL?) SALMON USE AREAS: 05

SITKA: 313

ASSESSMENTS

HOUSEHOLD ID

SUBSISTENCE ASSESSMENTS: ALL RESOURCES

To conclude our subsistence harvest section, I am going to ask a few general questions about ALL SUBSISTENCE RESOURCES.

Last year...
 ...did your household use LESS, SAME, or MORE subsistence resources than in recent years?..... X L S M ☐
 If LESS or MORE... X = do not use
 WHY was your use different?.....

1

2

Last year...
 ...did your household GET ENOUGH subsistence resources?..... Y N ☐
 If NO...
 What KIND of subsistence resources did you need?.....

1

2

 Overall why do you think you did not get enough subsistence foods?.....

1

2

 How would you describe the impact to your household
 of not getting enough all resources last year?..... ...not noticable? ...minor? ...major? severe?
 (0) (1) (2) (3) ☐
 Did your household do anything DIFFERENTLY because you did NOT get enough all resources?..... Y N ☐
 IF YES...
 What did your household do differently?.....

1

2

HEALTH IMPACT ASSESSMENTS

Now I am going to ask about the foods members of your household normally EAT. Our purposes are:
 ...to identify subsistence foods most commonly eaten, AND
 ...to identify other foods most commonly eaten IF people cannot get subsistence foods.

In a normal week, how many times a day on average are subsistence foods
 such as salmon, non-salmon fish, moose, caribou, birds, etc. served in your
 household?

NONE
Don't use
(0)

LESS than
once
a day
(?)

About
ONCE
a day
(?)

2 OR 3
times
a day
(?)

3 OR MORE
times
a day
(?)

☐

(circle ONE response)

If this household does NOT USE subsistence foods, go to the next page.
 Otherwise, continue below...

Please list the TOP FIVE SUBSISTENCE FOODS members of your household eat on a regular basis. Include subsistence foods that may not be available now, but are important at other times of the year. Please list most important foods first.

	Subsistence Food 1	Subsistence Food 2	Subsistence Food 3	Subsistence Food 4	Subsistence Food 5
TOP FIVE SUBSISTENCE FOODS					

If your household CANNOT GET SUBSISTENCE FOODS, what do members of your household eat instead? Include alternate foods that may not be available now, but are important at other times of the year. Please list most important alternative foods first.

	Other Food	Other Food	Other Food	Other Food	Other Food
OTHER FOODS (1 TO 5)					
OTHER FOODS (6 TO 10)					

FOOD SECURITY

HOUSEHOLD ID

The questions on this page have been asked all over the United States to find out if Americans have enough to eat. We would like to know if people in your community have enough to eat. I am going to read you FIVE statements about different food situations. Please tell me whether EACH statement was true for your household (HH) in the last 12 months.

Think about all your household's food, both subsistence and store-bought...

STATEMENT 1. We WORRIED that our household would not have ENOUGH FOOD.

In the last 12 months, was this OFTEN true, SOMETIMES true, or NEVER true for your household?.....

- [1] Often True
- [2] Sometimes True
- [3] Never True

HH2

if Y

STATEMENT 2. The food we had JUST DID NOT LAST, and we could not get more.

In the last 12 months, was this OFTEN true, SOMETIMES true, or NEVER true for your household?.....

- [1] Often True
- [2] Sometimes True
- [3] Never True

HH3

if Y

STATEMENT 3. We could not get the foods we wanted to eat because of a LACK OF RESOURCES.

By "lack of resources," we mean your household did NOT have what you needed to hunt, fish, gather, or buy food.

In the last 12 months, was this OFTEN true, SOMETIMES true, or NEVER true for your household?.....

- [1] Often True
- [2] Sometimes True
- [3] Never True

HH4

if Y

Now, think just about your household's SUBSISTENCE food...

STATEMENT 4. The SUBSISTENCE food we had just did not last, and we could not get more.

In the last 12 months, was this ever true for your household?.....

N Y ?

If YES, in which months did this happen?.....

J F M A M J J A S O N D

Now, think just about your household's STORE-BOUGHT food...

STATEMENT 5. The STORE-BOUGHT food we had just did not last, and we could not get more.

In the last 12 months, was this ever true for your household?.....

N Y ?

If YES, in which months did this happen?.....

J F M A M J J A S O N D

If Statements 1, 2, AND 3 were ALL "NO," go to the next page.

If any ONE of Statements 1, 2, OR 3 was "YES," continue on this page...

In the last 12 months, did you or other adults in your household ever CUT THE SIZE OF YOUR MEALS OR SKIP MEALS because the HH could not get the food that was needed?.....

N Y ?

AD1

If YES, how often did this happen?.....

- [1] Almost every month
- [2] Some months...
- [3] Only 1 or 2 months

In the last 12 months, did you or other adults in your household ever EAT LESS THAN YOU FELT YOU SHOULD because the HH could not get the food that was needed?.....

N Y ?

AD2

In the last 12 months, were adults in the HH ever HUNGRY BUT DID NOT EAT because there was not enough food?.....

N Y ?

AD3

In the last 12 months, did adults in the HH LOSE WEIGHT because there was not enough food?.....

N Y ?

AD4

In the last 12 months, did you or other adults in your household ever NOT EAT FOR A WHOLE DAY because there was not enough food?.....

N Y ?

AD5

If YES, how often did this happen?.....

- [1] Almost every month
- [2] Some months...
- [3] Only 1 or 2 months

EMPLOYMENT

FOR EACH PERSON IN THE HOUSEHOLD, 16 YEARS OLD AND OLDER

HOUSEHOLD ID

Between FEBRUARY 2013, and JANUARY 2014...

...Did any members of your household earn money from a JOB or from SELF EMPLOYMENT?..... Y N

For each member of this household born before 1998, please list EACH JOB held between FEBRUARY 2013, and JANUARY 2014.

For household members who did not have a job, write: "RETIRED," "UNEMPLOYED," "STUDENT," "HOMEMAKER," etc.

There should be at least ONE ROW for each member of this household born BEFORE 1998.

WORK SCHEDULE...

We ask about jobs and income because we are trying to understand all parts of the community economy. Many people use wages from jobs to support subsistence activities. If one person has more than one job, list each job on a separate line. (One person may have several lines.)

REMEMBER COMMERCIAL FISHING & TRAPPING IF APPLICABLE.

WHO HAD THIS JOB?	WHAT KIND OF WORK DID HE/SHE DO IN THIS JOB?	FOR WHOM DID HE/SHE WORK IN THIS JOB?	JOB LOCATION?	IN 2013, WHAT MONTHS DID HE OR SHE WORK IN THIS JOB?	WORK SCHEDULE...	IN 2013, HOW MUCH DID HE/SHE EARN IN THIS JOB?
person	job title	employer, SIC	community	circle each month worked	circle one	gross income
1ST JOB				J F M A M J J A S O N D	FT PT SF OC SP	\$ /YR
1 6	SOC	SIC			SCHEDULE	
2ND JOB				J F M A M J J A S O N D	FT PT SF OC SP	\$ /YR
2 6	SOC	SIC			SCHEDULE	
3RD JOB				J F M A M J J A S O N D	FT PT SF OC SP	\$ /YR
3 6	SOC	SIC			SCHEDULE	
4TH JOB				J F M A M J J A S O N D	FT PT SF OC SP	\$ /YR
4 6	SOC	SIC			SCHEDULE	
5TH JOB				J F M A M J J A S O N D	FT PT SF OC SP	\$ /YR
5 6	SOC	SIC			SCHEDULE	
6TH JOB				J F M A M J J A S O N D	FT PT SF OC SP	\$ /YR
6 6	SOC	SIC			SCHEDULE	
7TH JOB				J F M A M J J A S O N D	FT PT SF OC SP	\$ /YR
7 6	SOC	SIC			SCHEDULE	
8TH JOB				J F M A M J J A S O N D	FT PT SF OC SP	\$ /YR
8 6	SOC	SIC			SCHEDULE	
9TH JOB				J F M A M J J A S O N D	FT PT SF OC SP	\$ /YR
9 6	SOC	SIC			SCHEDULE	
10TH JOB				J F M A M J J A S O N D	FT PT SF OC SP	\$ /YR
10 6	SOC	SIC			SCHEDULE	
11TH JOB				J F M A M J J A S O N D	FT PT SF OC SP	\$ /YR
11 6	SOC	SIC			SCHEDULE	
12TH JOB				J F M A M J J A S O N D	FT PT SF OC SP	\$ /YR
12 6	SOC	SIC			SCHEDULE	

If a person is SELF-EMPLOYED (selling carvings, crafts, bread, etc), list that as a separate job. Enter "sewer," "carver," "baker," etc. as JOB TITLE. Work schedule usually will be "ON CALL." For gross income from self employment ("profit"), enter revenue MINUS expenses.

If a person is UNEMPLOYED, specify retired, unemployed, disabled, student, or homemaker as the JOB TITLE.
TRAPPING for barter or sale IS a job.
COMMERCIAL FISHING is recorded as "ON-CALL, VARIES" for work schedule.

WORK SCHEDULE
1 - Fulltime (35+ hours/week)
2 - Parttime (<35 hours/week)
3 - Shift (2 wks on/2 off, etc.)
4 - Irregular, on call

GROSS INCOME is the same as TAXABLE INCOME on a W-2 form.

EMPLOYMENT: 23

SITKA: 313

OTHER INCOME

THIS PAGE IS ONLY FOR INCOME THAT IS NOT EARNED FROM WORKING

HOUSEHOLD ID

Between FEBRUARY 2013, and JANUARY 2014...

...Did any members of your household receive a dividend from the Permanent Fund or a Native Corporation?..... Y N

IF NO, go to the next section on this page.

If YES, continue below...

		Did anyone in your household receive income from	TOTAL amount all members of your household received from
		in 2013?	in 2013.
		circle one	dollars
DIVIDENDS	ALASKA PERMANENT FUND DIVIDEND	Y N	\$ /YR
	32		
	NATIVE CORPORATION DIVIDENDS	Y N	\$ /YR
	13		

Alaska PFD IN 2013	Regional Corporations	Dividend
1 PFD = \$900	Sealaska (April)	
2 PFDs = \$1,800	(see worksheet for coding)	
3 PFDs = \$2,700	Share Type / number shares:	
4 PFDs = \$3,600		
5 PFDs = \$4,500		
6 PFDs = \$5,400	Sealaska (December)	
7 PFDs = \$6,300	(see worksheet for coding)	
8 PFDs = \$7,200	Share Type / number shares:	
9 PFDs = \$8,100		
10 PFDs = \$9,000		
11 PFDs = \$9,900	Village Corporation(s)	Dividend
12 PFDs = \$10,800	Shee Atika	\$ 6.00

Between FEBRUARY 2013, and JANUARY 2014...

...Did any members of your household receive OTHER income such as SENIOR BENEFITS or UNEMPLOYMENT?..... Y N

IF NO, go to the next page.

If YES, continue below...

		Received?	Total Amount?
		circle one	dollars
EMPLOYMENT RELATED	UNEMPLOYMENT	Y N	\$ /YR
	12		
	WORKERS' COMP	Y N	\$ /YR
	8		
	SOCIAL SECURITY	Y N	\$ /YR
	7		
	PENSION & RETIREMENT	Y N	\$ /YR
FAMILY & CHILD	5		
	DISABILITY	Y N	\$ /YR
	31		
	VETERANS ASSISTANCE	Y N	\$ /YR
	35		
	FOOD STAMPS (QUEST CARD)	Y N	\$ /YR
	11		
ENTITLEMENTS	ADULT PUBLIC ASSISTANCE	Y N	\$ /YR
	3		
	SUPPLEMENTAL SECURITY INCOME (SSI)	Y N	\$ /YR
STATE BENEFITS	10		
	ENERGY ASSISTANCE	Y N	\$ /YR
	9		
	ALASKA SENIOR BENEFITS (LONGEVITY)	Y N	\$ /YR
	6		

		Received?	Total Amount?
		circle one	dollars
OTHER	TANF (say "Tanif," used to be AFDC)	Y N	\$ /YR
	2		
	CHILD SUPPORT	Y N	\$ /YR
	15		
	FOSTER CARE	Y N	\$ /YR
	41		
	FUEL VOUCHERS	Y N	\$ /YR
	MEETING HONORARIA (not per diem*)	Y N	\$ /YR
	OTHER (describe)	Y N	\$ /YR
	OTHER (describe)	Y N	\$ /YR

* per diem covers travel expenses, and is not counted as income.

Scratch paper for calculations

for _____ weeks =

for _____ months =

for _____ weeks =

for _____ months =

Senior benefits of \$125 per month for 12 months = \$1,500 per elder

Senior benefits of \$175 per month for 12 months = \$2,100 per elder

Senior benefits of \$250 per month for 12 months = \$3,000 per elder

OTHER INCOME: 24

SITKA: 313

COMMENTS HOUSEHOLD ID

HOUSEHOLD ID

DO YOU HAVE ANY QUESTIONS, COMMENTS, OR CONCERNS?

This image shows a blank sheet of white paper with horizontal ruling lines. The lines are evenly spaced and extend across the width of the page. There are no margins, text, or other markings on the paper.

INTERVIEW SUMMARY:

This image shows a blank sheet of white paper with horizontal ruling lines. The lines are evenly spaced and extend across the width of the page. There are no margins, text, or other markings on the paper.

BE SURE TO FILL IN THE STOP TIME ON THE FIRST PAGE!!!!

COMMENTS: 30 SITKA: 313

SITKA: 313

APPENDIX B—CONVERSION FACTORS

The following table presents the conversion factors used in determining how many pounds were harvested of each resource surveyed. For instance, if respondents reported harvesting 3 qt of smelt, the quantity would be multiplied by the appropriate conversion factor (in this case 1.5) to show a harvest of 4.5 lb of smelt.

Resource name	Reported units	Conversion factor
Chum salmon	Individual	6.0384
Chum salmon [CF retention]	Individual	6.0384
Coho salmon	Individual	4.2750
Coho salmon	Pounds	1.0000
Coho salmon [CF retention]	Individual	4.2750
Chinook salmon	Individual	9.3600
Chinook salmon [CF retention]	Individual	9.3600
Pink salmon	Individual	2.5696
Pink salmon [CF retention]	Individual	2.5696
Sockeye salmon	Individual	4.4622
Sockeye salmon [CF retention]	Individual	4.4622
Unknown salmon	Individual	5.4471
Pacific herring	Individual	0.4000
Pacific herring	Pounds	1.0000
Pacific herring	Gallons	6.0000
Pacific herring [CF retention]	Individual	0.4000
Pacific herring [CF retention]	Gallons	6.0000
Pacific herring roe/unspecified	Gallons	3.9485
Pacific herring sac roe [CF retention]	Individual	1.0000
Pacific herring sac roe [CF retention]	Gallons	3.9485
Pacific herring spawn on kelp	Pounds	1.0000
Pacific herring spawn on kelp	Gallons	3.9485
Pacific herring spawn on kelp [CF retention]	Individual	3.9485
Pacific herring spawn on kelp [CF retention]	Gallons	3.9485
Pacific herring roe on hair seaweed	Pounds	1.0000
Pacific herring roe on hair seaweed	Gallons	3.9485
Pacific herring roe on hair seaweed	Quarts	1.3500
Pacific herring roe on hemlock branches	Pounds	1.0000
Pacific herring roe on hemlock branches	Gallons	3.9485
Eulachon (hooligan, candlefish)	Gallons	9.0000
Silver smelt	Gallons	9.0000
Silver smelt	Quarts	2.2500
Pacific (gray) cod	Individual	3.2000
Pacific (gray) cod	Pounds	1.0000
Pacific (gray) cod [CF retention]	Individual	3.2000
Pacific tomcod	Individual	0.5000
Pacific tomcod [CF retention]	Individual	0.5000
Flounder	Individual	3.0000
Flounder [CF retention]	Individual	3.0000
Lingcod	Individual	6.3000
Lingcod [CF retention]	Individual	6.3000

-continued-

Appendix B.–Page 2 of 8.

Resource name	Reported units	Conversion factor
Pacific halibut	Individual	22.8100
Pacific halibut	Pounds	1.0000
Pacific halibut [CF retention]	Individual	22.8100
Pacific halibut [CF retention]	Pounds	1.0000
Perch	Individual	1.0000
Black rockfish	Individual	2.0000
Black rockfish	Pounds	1.0000
Black rockfish [CF retention]	Individual	2.0000
Black rockfish [CF retention]	Pounds	1.0000
Yelloweye rockfish	Individual	3.0000
Yelloweye rockfish [CF retention]	Individual	3.0000
Yelloweye rockfish [CF retention]	Pounds	1.0000
Quillback rockfish	Individual	3.0000
Dusky rockfish	Individual	2.0000
Copper rockfish	Individual	3.0000
Unknown rockfish	Individual	2.5478
Unknown rockfish [CF retention]	Individual	2.5478
Sablefish (black cod)	Individual	4.0000
Sablefish (black cod)	Pounds	1.0000
Sablefish (black cod) [CF retention]	Individual	4.0000
Sablefish (black cod) [CF retention]	Pounds	1.0000
Sablefish (black cod) [CF retention]	Gallons	1.0000
Buffalo sculpin	Individual	1.0000
Red Irish lord	Individual	1.0000
Shark	Individual	9.0000
Skates	Individual	5.0000
Sole	Individual	1.0000
Dolly Varden	Individual	3.0000
Cutthroat trout	Individual	1.5000
Rainbow trout	Individual	2.0000
Steelhead	Individual	8.5000
Steelhead [CF retention]	Individual	8.5000
Unknown trout	Individual	1.9152
Unknown whitefishes	Individual	1.7500
Black bear	Individual	58.0000
Brown bear	Individual	150.0000
Caribou	Individual	130.0000
Deer	Individual	80.0000
Elk	Individual	225.0000
Mountain goat	Individual	102.0000
Moose	Individual	400.0000
Dall sheep	Individual	104.0000
Beaver	Individual	8.7500
Coyote	Individual	20.0000
Red fox	Individual	0.0000
Snowshoe hare	Individual	2.0000

-continued-

Appendix B.–Page 3 of 8.

Resource name	Reported units	Conversion factor
North American river (land) otter	Individual	0.0000
Lynx	Individual	0.0000
Marmot	Individual	1.5000
Marten	Individual	0.5000
Mink	Individual	0.0000
Muskrat	Individual	2.4000
Porcupine	Individual	6.0000
Red (tree) squirrel	Individual	0.5000
Least weasel	Individual	0.0000
Gray wolf	Individual	0.0000
Wolverine	Individual	0.0000
Fur seal	Individual	0.0000
Harbor seal	Individual	84.0000
Unknown seal	Individual	84.0000
Sea otter	Individual	0.0000
Steller sea lion	Individual	200.0000
Unknown whale	Individual	0.0000
Unknown marine mammals	Individual	0.0000
Goldeneye	Individual	0.8000
Mallard	Individual	1.0000
Long-tailed duck	Individual	1.3400
Northern pintail	Individual	1.0000
Scaup	Individual	1.0000
Teal	Individual	0.5200
American wigeon	Individual	1.3100
Unknown ducks	Individual	0.9496
Brant	Individual	1.2000
Canada goose	Individual	3.4200
White-fronted goose	Individual	4.2400
Unknown geese	Individual	2.3100
Swans	Individual	8.0000
Sandhill crane	Individual	8.4000
Black oystercatcher	Individual	0.5700
Unknown shorebirds – small	Individual	0.1000
Unknown shorebirds – large	Individual	0.5000
Guillemot	Individual	1.0000
Unknown loon	Individual	1.0000
Unknown seabirds	Individual	1.0000
Grouse	Individual	1.0000
Ptarmigan	Individual	1.0000
Mallard eggs	Individual	0.3000
Unknown duck eggs	Individual	0.3000
Canada goose eggs	Individual	0.2700
Unknown goose eggs	Individual	0.2800
Swan eggs	Individual	0.6000
Crane eggs	Individual	0.6300

-continued-

Appendix B.–Page 4 of 8.

Resource name	Reported units	Conversion factor
Black oystercatcher eggs	Individual	0.1000
Unknown shorebird eggs – small	Individual	0.0500
Unknown shorebird eggs – large	Individual	0.1000
Glaucous-winged gull eggs	Individual	0.2500
Unknown loon eggs	Individual	0.3000
Tern eggs	Individual	0.0400
Unknown seabird eggs	Individual	0.3000
Grouse eggs	Individual	0.0500
Ptarmigan eggs	Individual	0.0500
Abalone	Individual	0.1300
Abalone	Gallons	2.1000
Red (large) chitons	Gallons	3.0000
Black (small) chitons	Individual	0.2500
Black (small) chitons	Pounds	1.0000
Black (small) chitons	5 gallon buckets	37.5000
Black (small) chitons	Gallons	7.5000
Butter clams	Individual	0.1200
Butter clams	5 gallon buckets	22.2500
Butter clams	Gallons	4.4500
Horse clams	Gallons	4.4500
Pacific littleneck clams (steamers)	Individual	0.2500
Pacific littleneck clams (steamers)	5 gallon buckets	15.0000
Pacific littleneck clams (steamers)	Gallons	3.0000
Razor clams	Gallons	4.0000
Razor clams	Quarts	1.0000
Unknown clams	Individual	0.2326
Unknown clams	Gallons	4.1416
Basket (large) cockles	Individual	0.2500
Basket (large) cockles	5 gallon buckets	15.5500
Basket (large) cockles	Gallons	3.1100
Heart (small) cockles	5 gallon buckets	15.5500
Heart (small) cockles	Gallons	3.1100
Unknown cockles	Individual	0.2500
Unknown cockles	Gallons	3.1100
Dungeness crab	Individual	1.3200
Dungeness crab	Pounds	1.0000
Dungeness crab [CF retention]	Individual	1.3200
Blue king crab	Individual	5.0700
Blue king crab [CF retention]	Individual	5.0700
Brown king crab	Individual	5.3800
Brown king crab [CF retention]	Individual	5.3800
Red king crab	Individual	5.3800
Red king crab [CF retention]	Individual	5.3800
Tanner crab	Individual	2.0000
Tanner crab [CF retention]	Individual	2.0000
Unknown crab	Individual	1.7387

-continued-

Appendix B.–Page 5 of 8.

Resource name	Reported units	Conversion factor
Geoducks	Gallons	3.0000
Geoducks [CF retention]	Individual	0.2500
Geoducks [CF retention]	Gallons	3.0000
Limpets	Gallons	1.5000
Limpets	Half-pints	0.0500
Mussels	Gallons	1.5000
Octopus	Individual	6.4000
Octopus	Pounds	1.0000
Octopus [CF retention]	Individual	6.4000
Octopus [CF retention]	Pounds	1.0000
Oyster	Gallons	0.2500
Weathervane scallops	Gallons	1.6500
Weathervane scallops [CF retention]	Individual	0.0500
Weathervane scallops [CF retention]	Gallons	1.6500
Rock scallops	Individual	0.0500
Rock scallops	Gallons	1.6300
Sea cucumber	Individual	0.1000
Sea cucumber	Pounds	1.0000
Sea cucumber [CF retention]	Individual	0.1000
Sea cucumber [CF retention]	Pounds	1.0000
Green sea urchin	Gallons	2.0000
Red sea urchin	Individual	1.7000
Red sea urchin	Gallons	1.7000
Red sea urchin [CF retention]	Individual	1.7000
Red sea urchin [CF retention]	Gallons	1.7000
Purple sea urchin	Gallons	1.7000
Shrimp	Individual	0.0100
Shrimp	Pounds	1.0000
Shrimp	Gallons	8.0000
Shrimp [CF retention]	Individual	0.0100
Shrimp [CF retention]	Pounds	1.0000
Squid	Pounds	1.0000
Blueberry	Pounds	1.0000
Blueberry	5 gallon buckets	20.0000
Blueberry	Gallons	4.0000
Blueberry	Quarts	1.0000
Blueberry	Pints	0.5000
Blueberry	Half-pints	0.2500
Lowbush cranberry	5 gallon buckets	20.0000
Lowbush cranberry	Gallons	4.0000
Lowbush cranberry	Quarts	1.0000
Highbush cranberry	Gallons	4.0000
Crowberry	Gallons	4.0000
Crowberry	Half-pints	0.2500
Elderberry	Pounds	1.0000
Elderberry	5 gallon buckets	20.0000

-continued-

Appendix B.–Page 6 of 8.

Resource name	Reported units	Conversion factor
Elderberry	Gallons	4.0000
Elderberry	Half-pints	0.2500
Gooseberry	5 gallon buckets	20.0000
Gooseberry	Gallons	4.0000
Gooseberry	Quarts	1.0000
Currants	Pounds	1.0000
Currants	5 gallon buckets	20.0000
Currants	Gallons	4.0000
Currants	Quarts	1.0000
Huckleberry	Pounds	1.0000
Huckleberry	5 gallon buckets	20.0000
Huckleberry	Gallons	4.0000
Huckleberry	Quarts	1.0000
Huckleberry	Pints	0.5000
Huckleberry	Half-pints	0.2500
Cloudberry	Gallons	4.0000
Cloudberry	Quarts	1.0000
Cloudberry	Half-pints	0.2500
Nagoonberry	Gallons	4.0000
Nagoonberry	Pints	0.5000
Raspberry	Gallons	4.0000
Raspberry	Quarts	1.0000
Raspberry	Pints	0.5000
Raspberry	Half-pints	0.2500
Salmonberry	Pounds	1.0000
Salmonberry	5 gallon buckets	20.0000
Salmonberry	Gallons	4.0000
Salmonberry	Quarts	1.0000
Salmonberry	Pints	0.5000
Salmonberry	Half-pints	0.2500
Soapberry	Gallons	4.0000
Strawberry	Gallons	4.0000
Strawberry	Quarts	1.0000
Strawberry	Half-pints	0.2500
Thimbleberry	Gallons	4.0000
Thimbleberry	Quarts	1.0000
Thimbleberry	Pints	0.5000
Thimbleberry	Half-pints	0.2500
Twisted stalk berry (watermelon berry)	Pounds	1.0000
Twisted stalk berry (watermelon berry)	Gallons	4.0000
Twisted stalk berry (watermelon berry)	Quarts	1.0000
Twisted stalk berry (watermelon berry)	Half-pints	0.2500
Other wild berry	5 gallon buckets	20.0000
Other wild berry	Gallons	4.0000
Other wild berry	Pints	0.5000
Beach asparagus	Pounds	1.0000

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Appendix B.–Page 7 of 8.

Resource name	Reported units	Conversion factor
Beach asparagus	Gallons	1.0000
Beach asparagus	Pints	0.1250
Beach asparagus	Half-pints	0.0625
Goose tongue	Pounds	1.0000
Goose tongue	Gallons	1.0000
Goose tongue	Quarts	0.2500
Wild rhubarb	Pounds	1.0000
Wild rhubarb	Gallons	1.0000
Wild potato	Gallons	1.0000
Devil's club	5 gallon buckets	5.0000
Devil's club	Gallons	1.0000
Devil's club	Quarts	0.2500
Fiddlehead ferns	Pounds	1.0000
Fiddlehead ferns	Gallons	1.0000
Fiddlehead ferns	Quarts	0.2500
Nettle	Gallons	1.0000
Hudson's Bay (Labrador) tea	Gallons	1.0000
Hudson's Bay (Labrador) tea	Quarts	0.2500
Hudson's Bay (Labrador) tea	Pints	0.1250
Hudson's Bay (Labrador) tea	Half-pints	0.0625
Indian rice	Gallons	1.0000
Indian rice	Half-pints	0.0625
Mint	Gallons	1.0000
Mint	Half-pints	0.0625
Salmonberry shoots	Individual	0.0625
Salmonberry shoots	Gallons	1.0000
Salmonberry shoots	Quarts	0.2500
Skunk cabbage	Gallons	1.0000
Dandelion greens	Gallons	1.0000
Dandelion greens	Half-pints	0.0625
Sourdock	Gallons	1.0000
Spruce tips	Gallons	1.0000
Spruce tips	Quarts	0.2500
Spruce tips	Pints	0.1250
Spruce tips	Half-pints	0.0625
Wild celery	Gallons	1.0000
Wild parsley	Gallons	1.0000
Wild rose hips	Gallons	4.0000
Yarrow	Pounds	1.0000
Yarrow	Gallons	1.0000
Unknown mushrooms	Individual	1.0000
Unknown mushrooms	Pounds	1.0000
Unknown mushrooms	5 gallon buckets	5.0000
Unknown mushrooms	Gallons	1.0000
Unknown mushrooms	Quarts	0.2500
Unknown mushrooms	Pints	0.1250

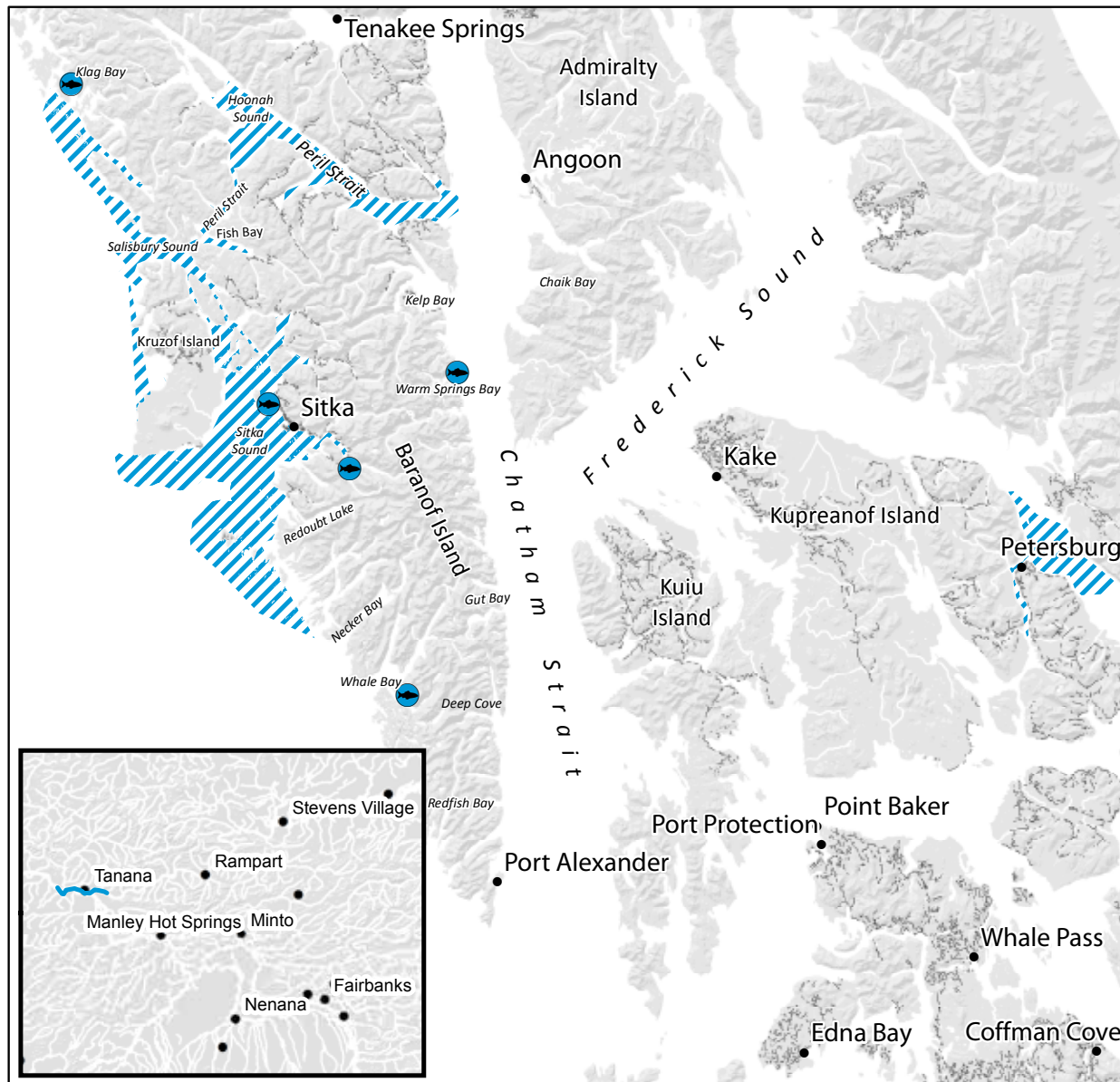
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Appendix B.–Page 8 of 8.

Resource name	Reported units	Conversion factor
Unknown mushrooms	Half-pints	0.0625
Fireweed	Pounds	1.0000
Fireweed	Gallons	1.0000
Stinkweed	Gallons	1.0000
Unknown greens from land	Pounds	1.0000
Unknown greens from land	Gallons	1.0000
Unknown greens from land	Quarts	0.2500
Black seaweed	Pounds	1.0000
Black seaweed	Gallons	2.5000
Black seaweed	Quarts	0.6250
Black seaweed	Pints	0.3125
Bull kelp	Gallons	4.0000
Red seaweed	Gallons	3.0000
Sea ribbons	Pounds	1.0000
Sea ribbons	Gallons	3.0000
Giant kelp (<i>macropcystis</i>)	Gallons	4.0000
Alaria	Gallons	3.0000
Bladder wrack	Gallons	3.0000
Unknown seaweed	Gallons	2.8096
Wood	Cords	0.0000
Bark	Gallons	0.0000
Spruce pitch	Gallons	0.0000
Spruce pitch	Half-pints	0.0000
Alder	Cords	0.0000
Other wood	Cords	0.0000

Source ADF&G Division of Subsistence household surveys, 2014.

APPENDIX C–SEARCH AND HARVEST AREA MAPS, SITKA, 2013



SITKA HARVEST OF WILD RESOURCES, 2013

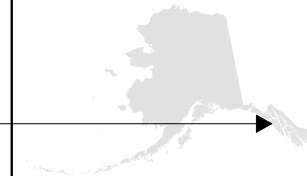


Chum salmon search and harvest area

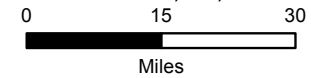
Chum salmon search and harvest area

Chum salmon search and harvest area

Roads and Forest Service Roads



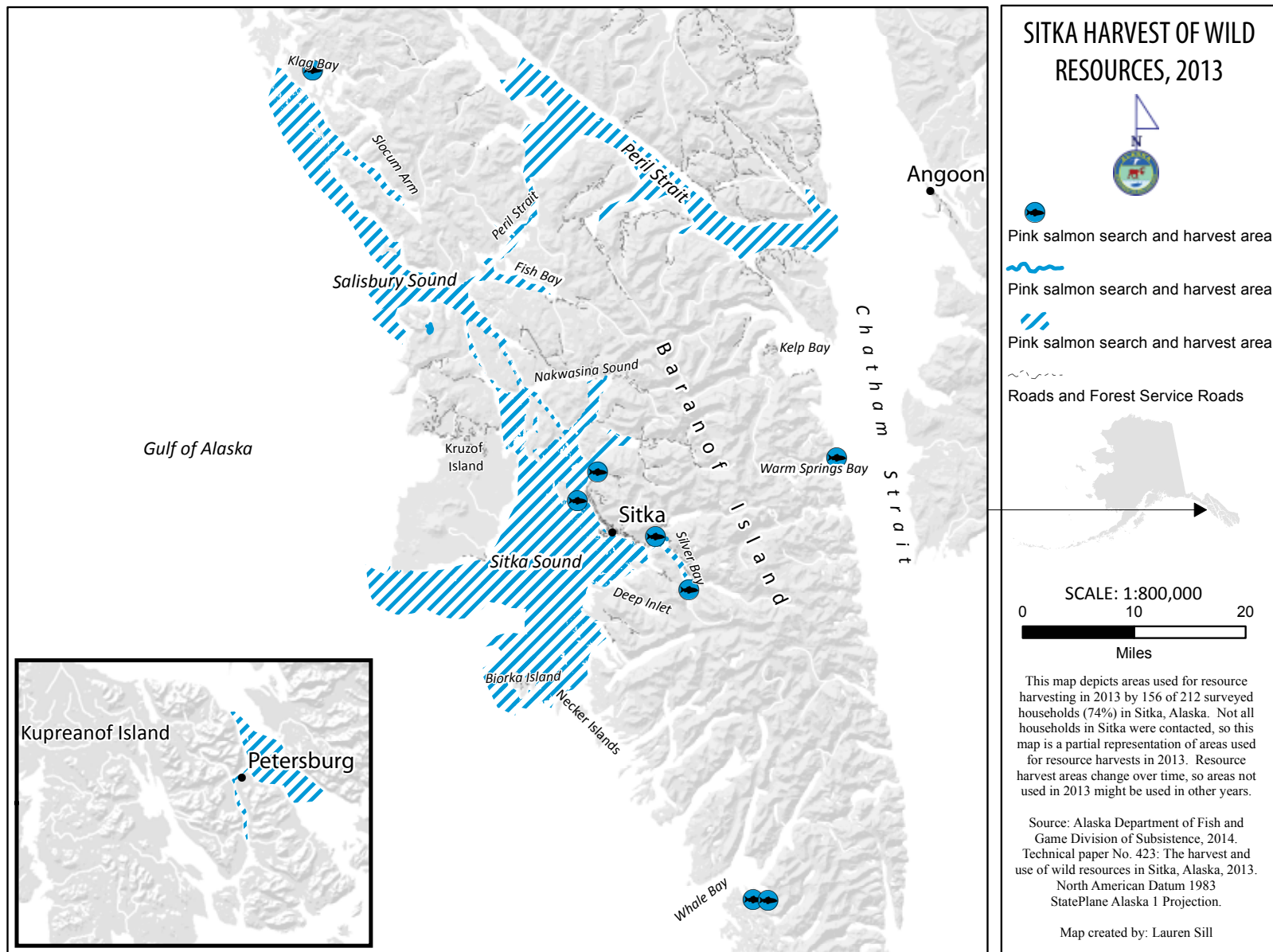
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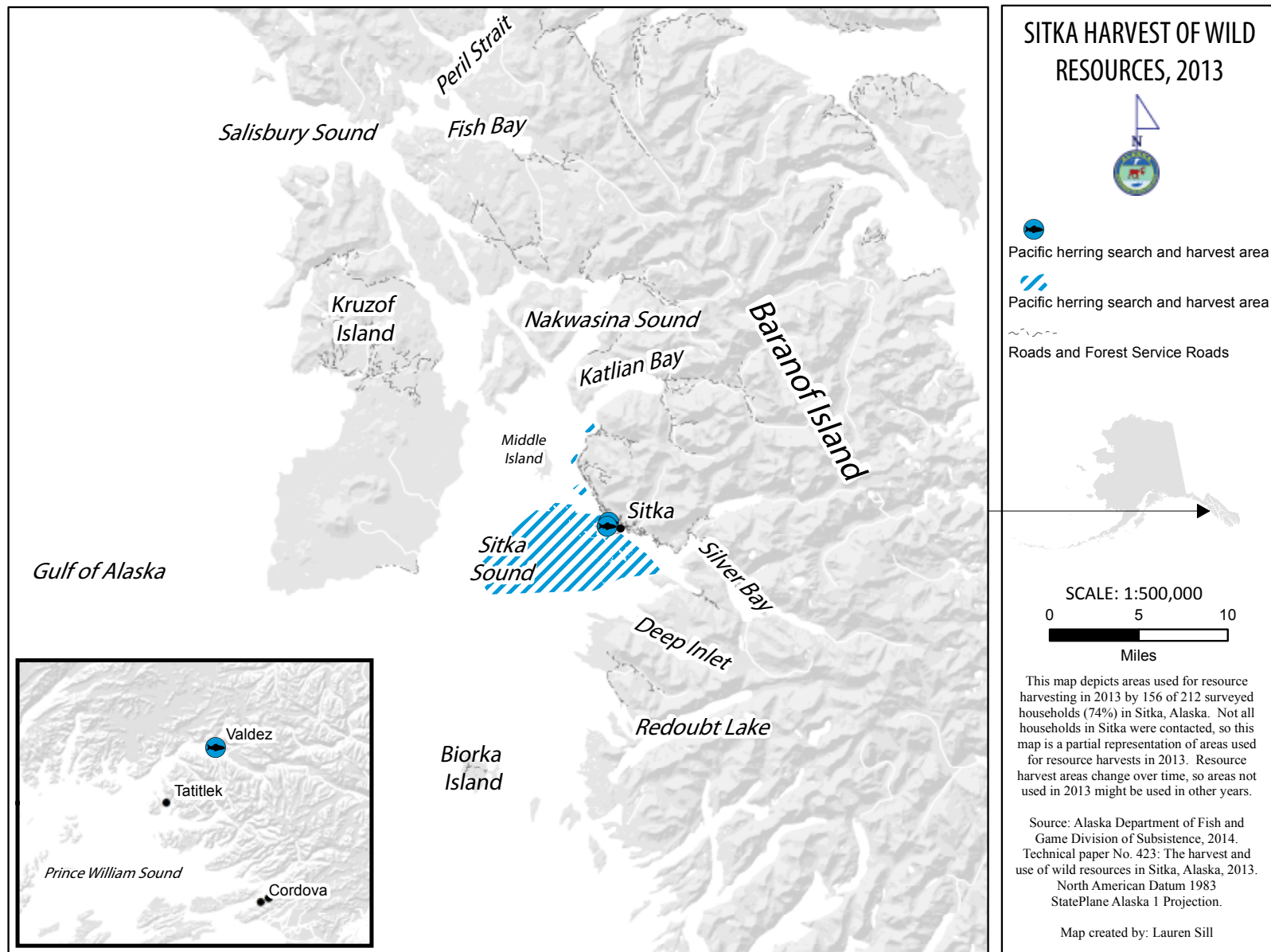


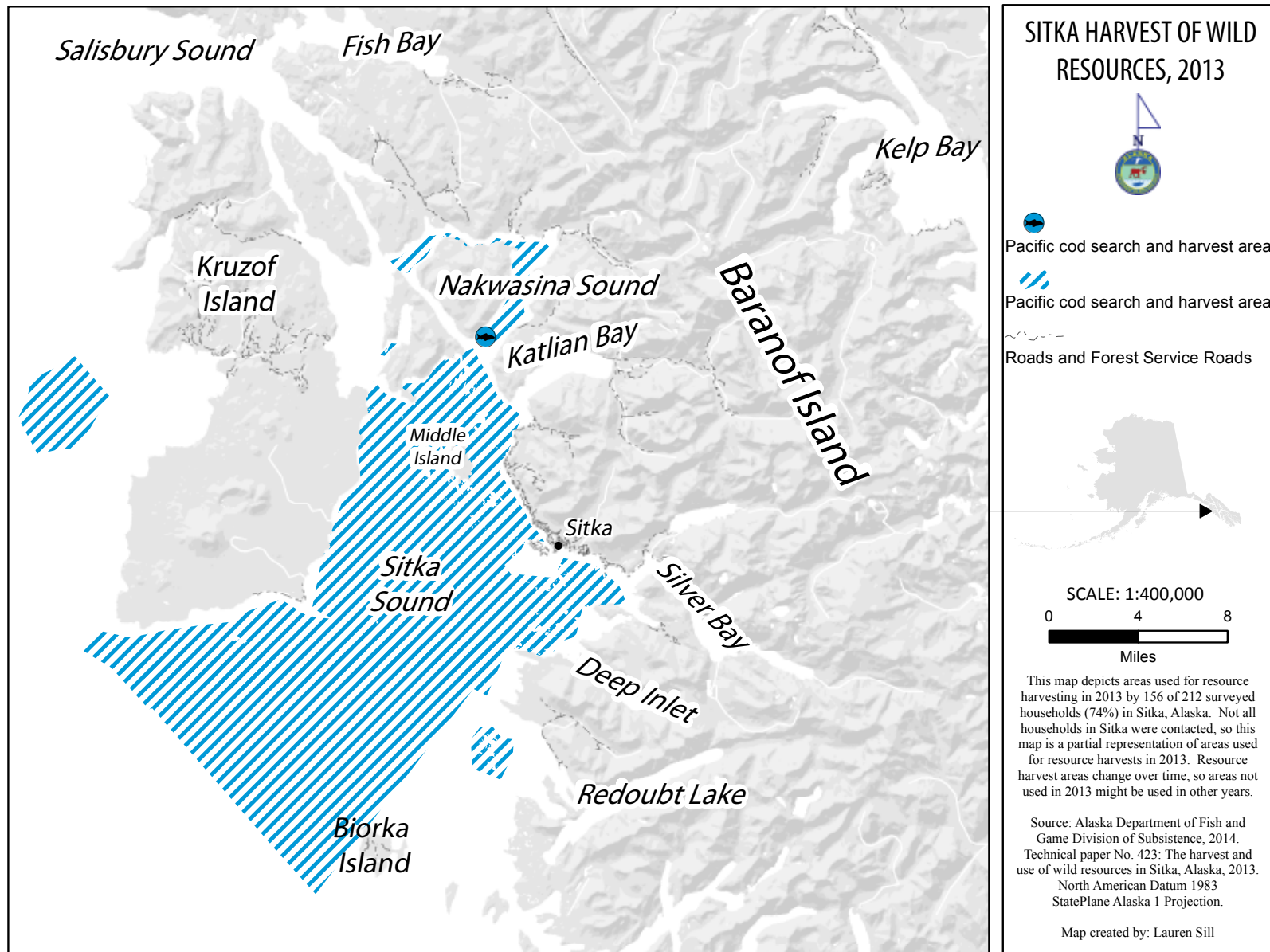
This map depicts areas used for resource harvesting in 2013 by 156 of 212 surveyed households (74%) in Sitka, Alaska. Not all households in Sitka were contacted, so this map is a partial representation of areas used for resource harvests in 2013. Resource harvest areas change over time, so areas not used in 2013 might be used in other years.

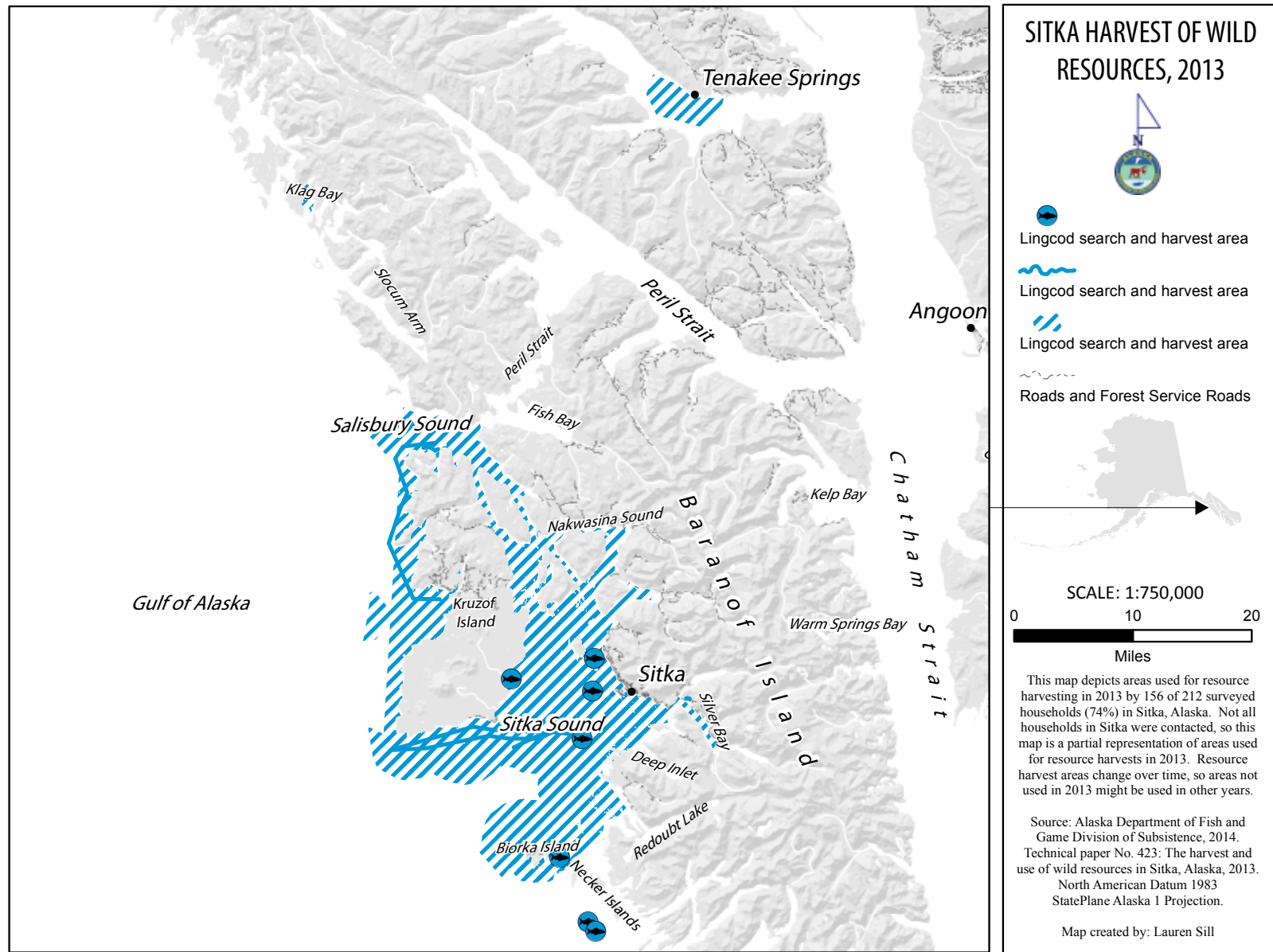
Source: Alaska Department of Fish and Game Division of Subsistence, 2014.
Technical paper No. 423: The harvest and use of wild resources in Sitka, Alaska, 2013.
North American Datum 1983
StatePlane Alaska 1 Projection.

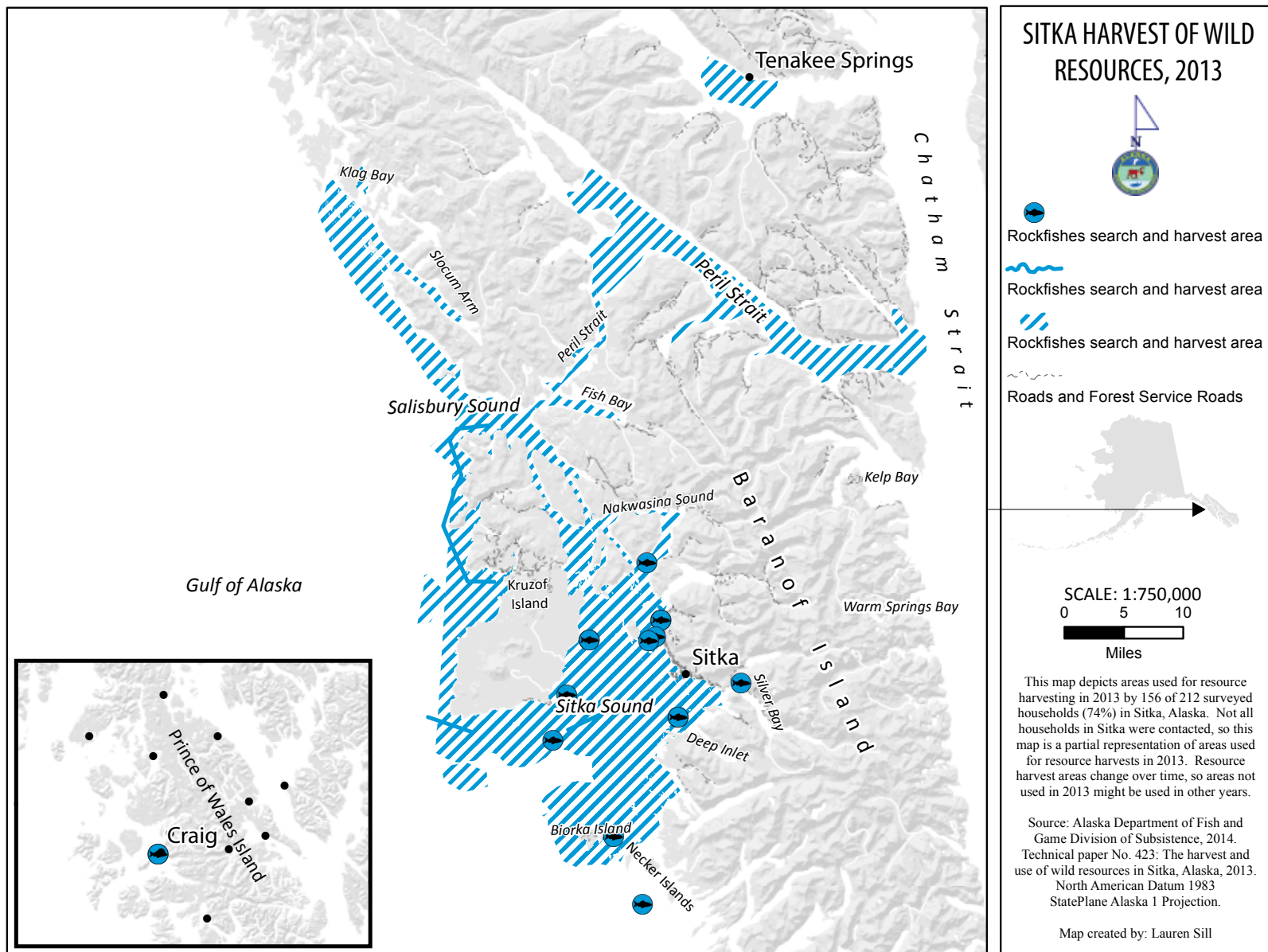
Map created by: Lauren Sill

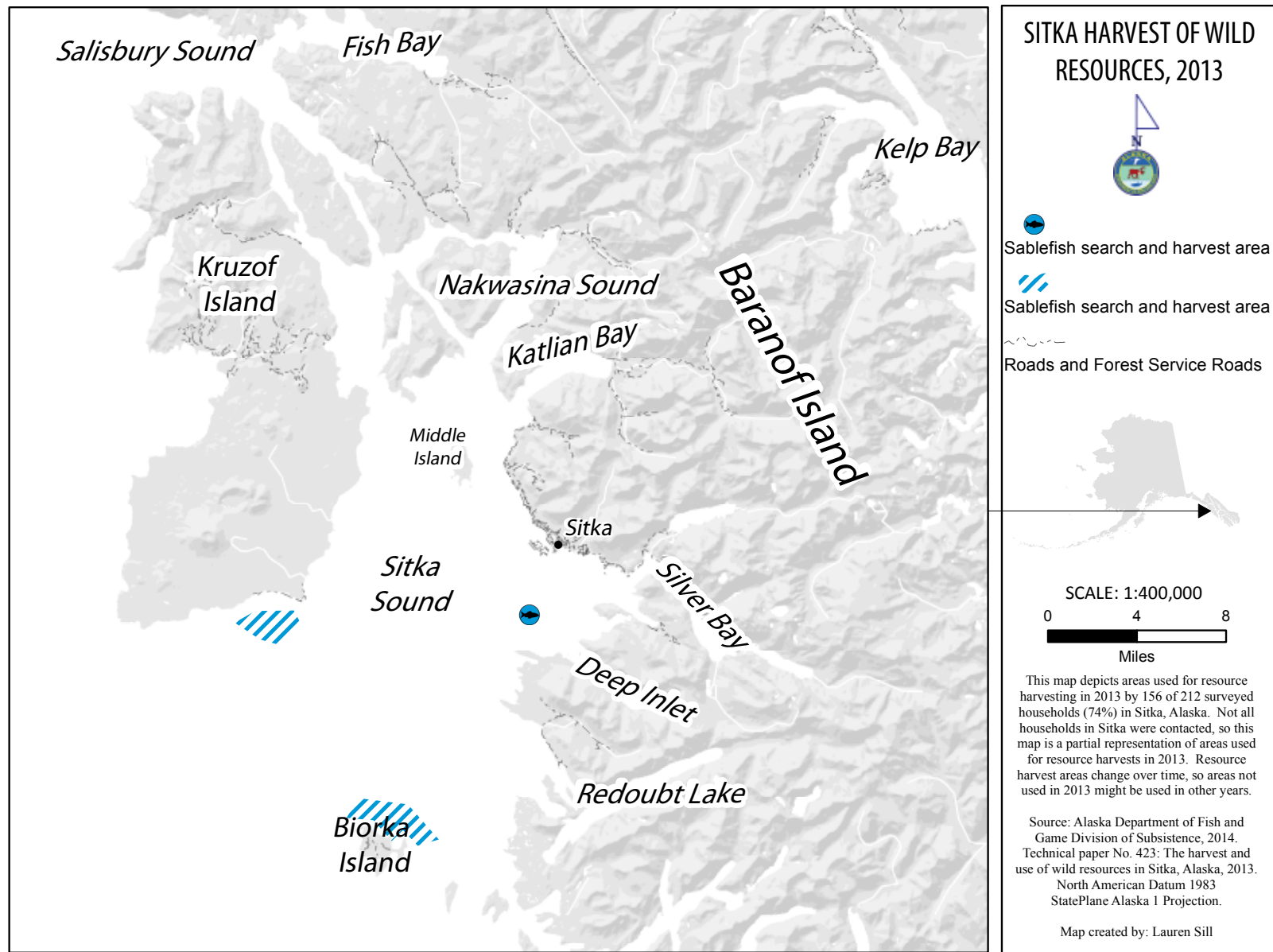


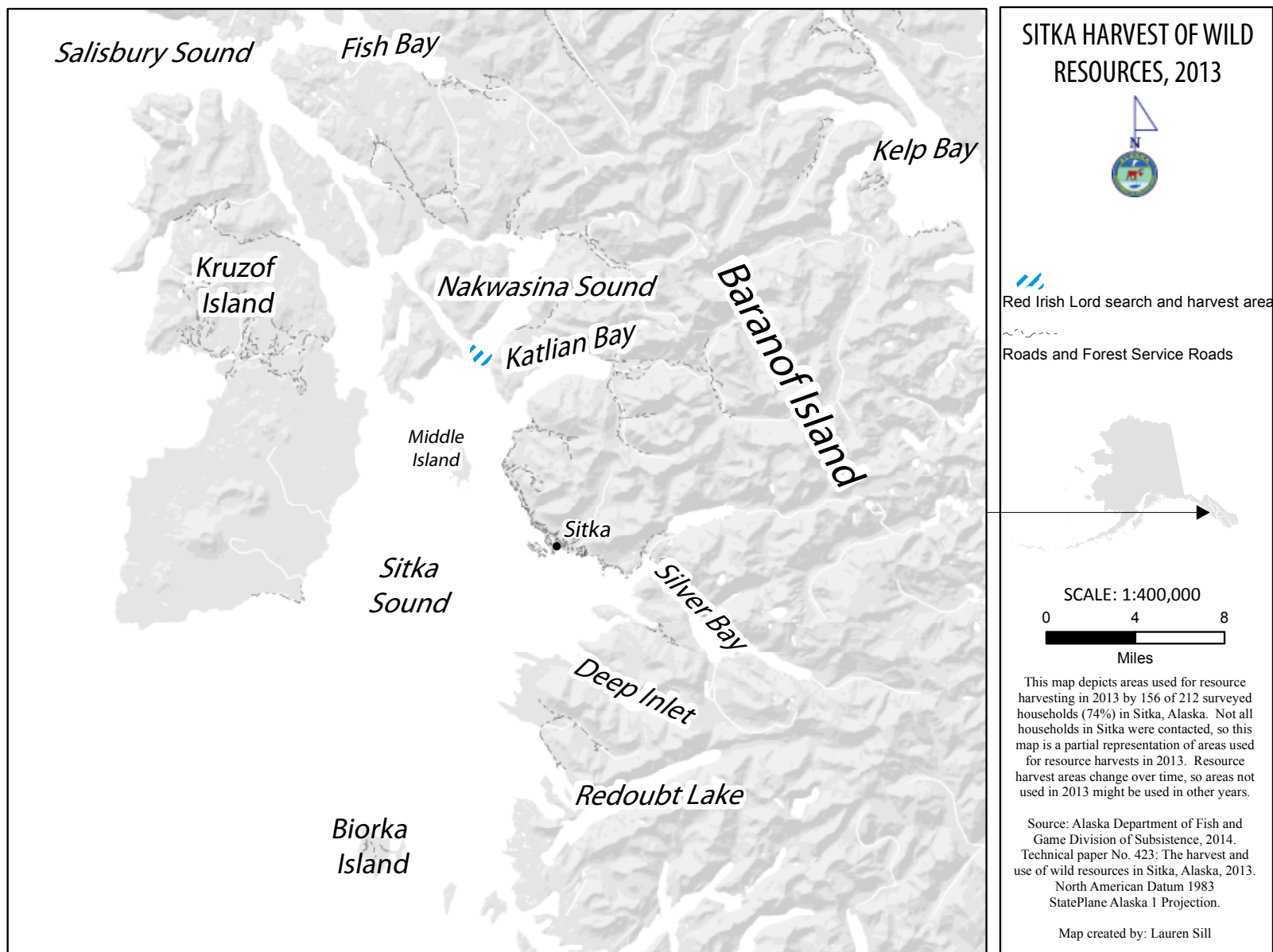


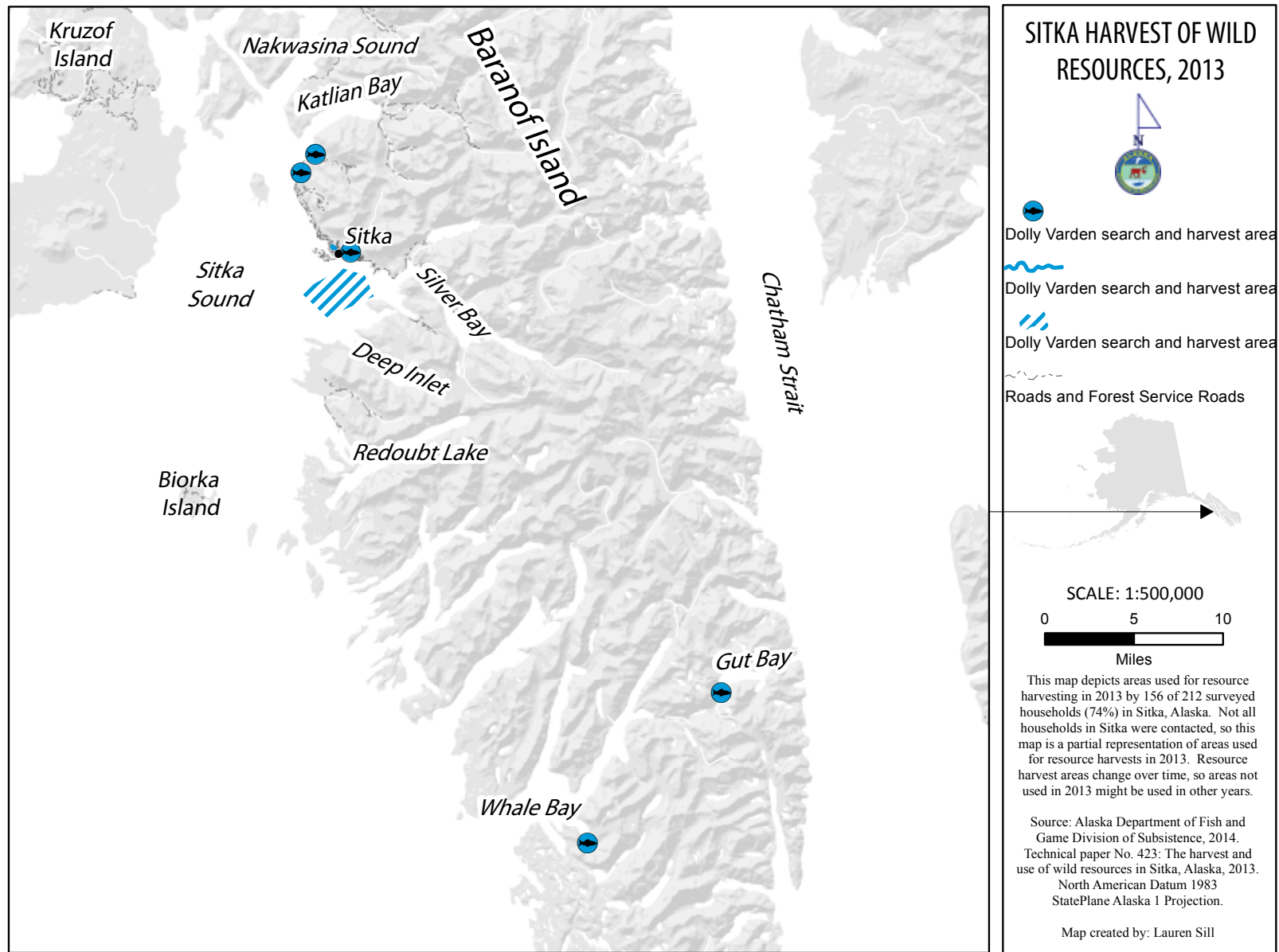


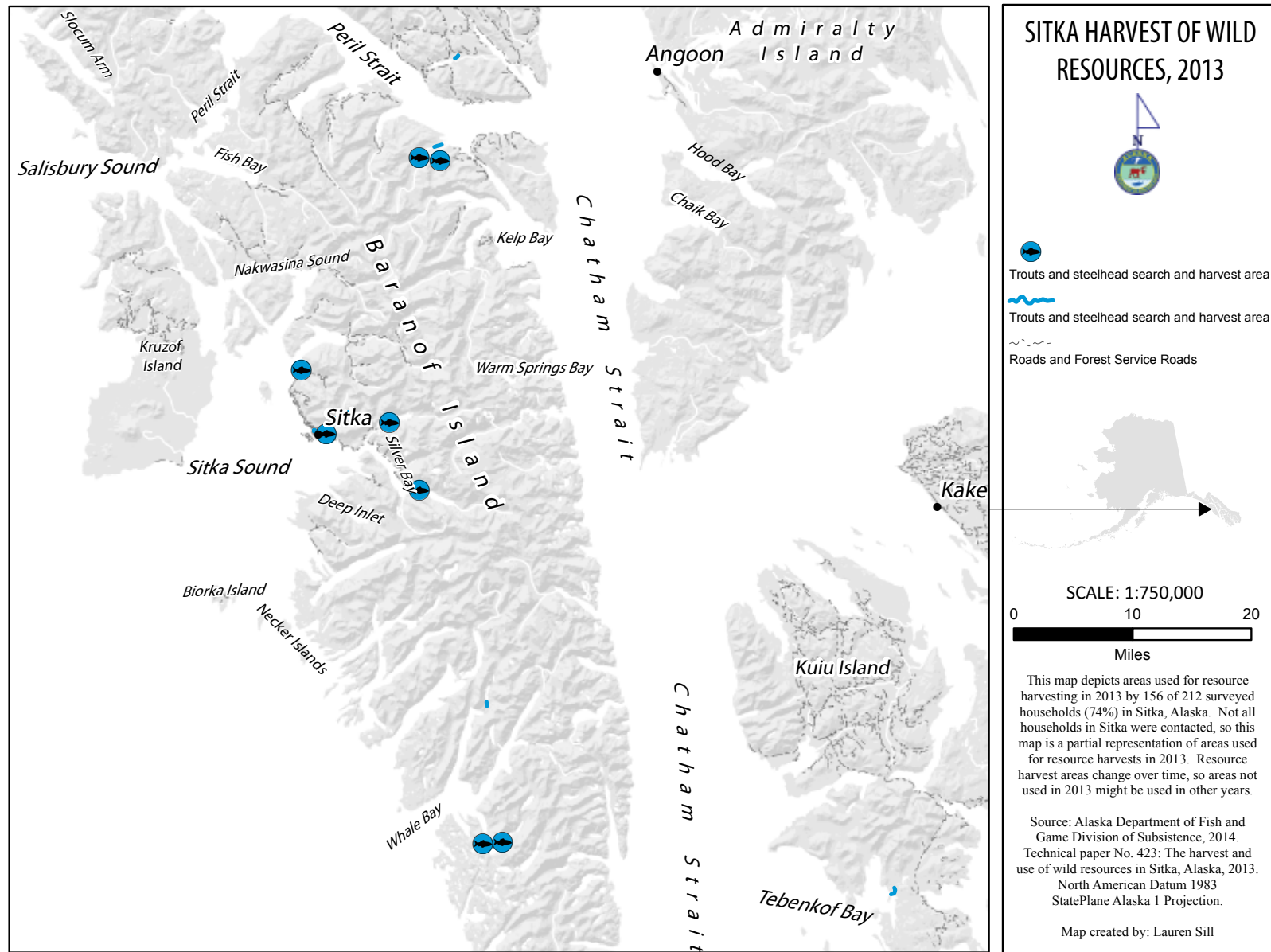


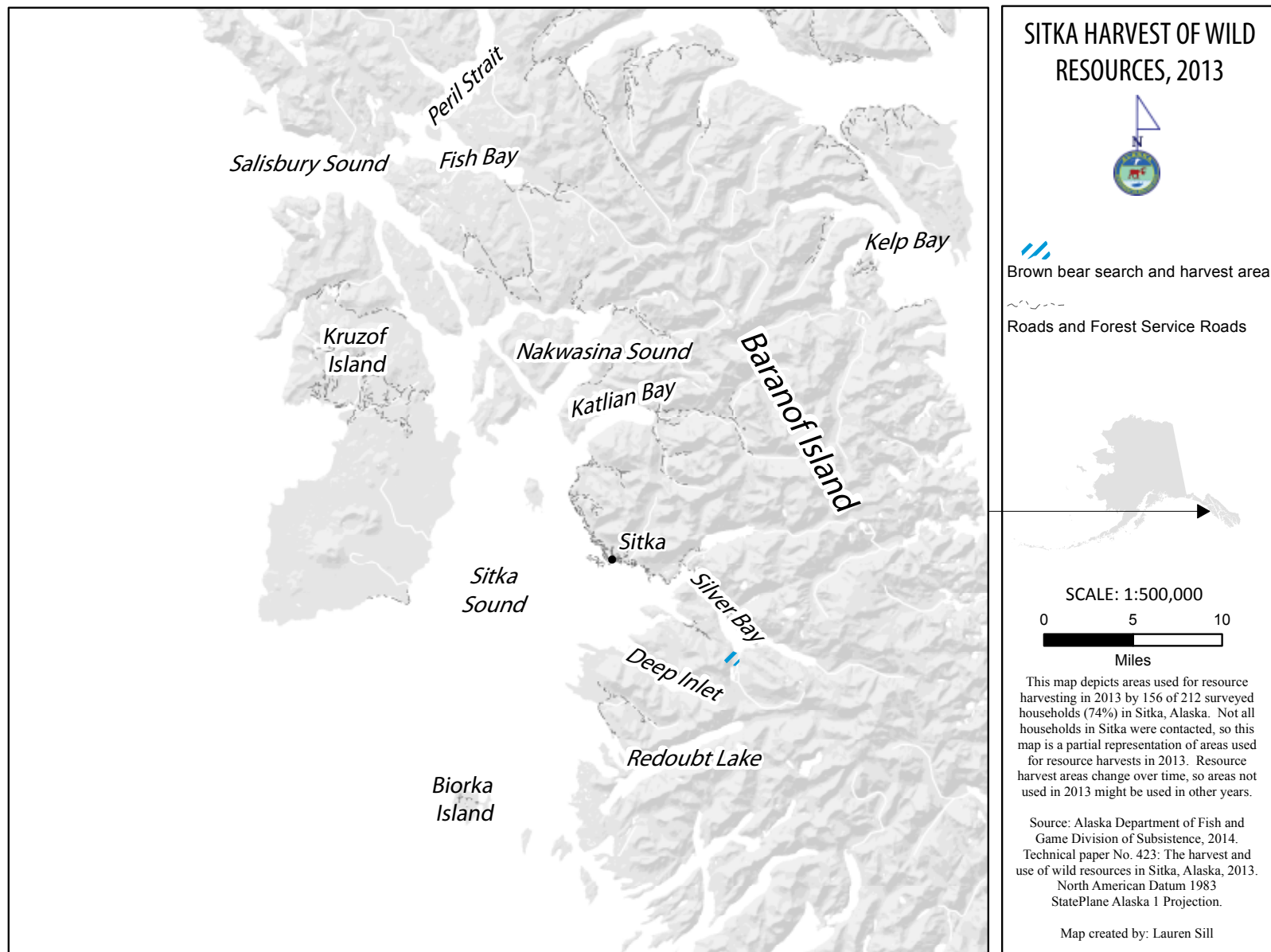


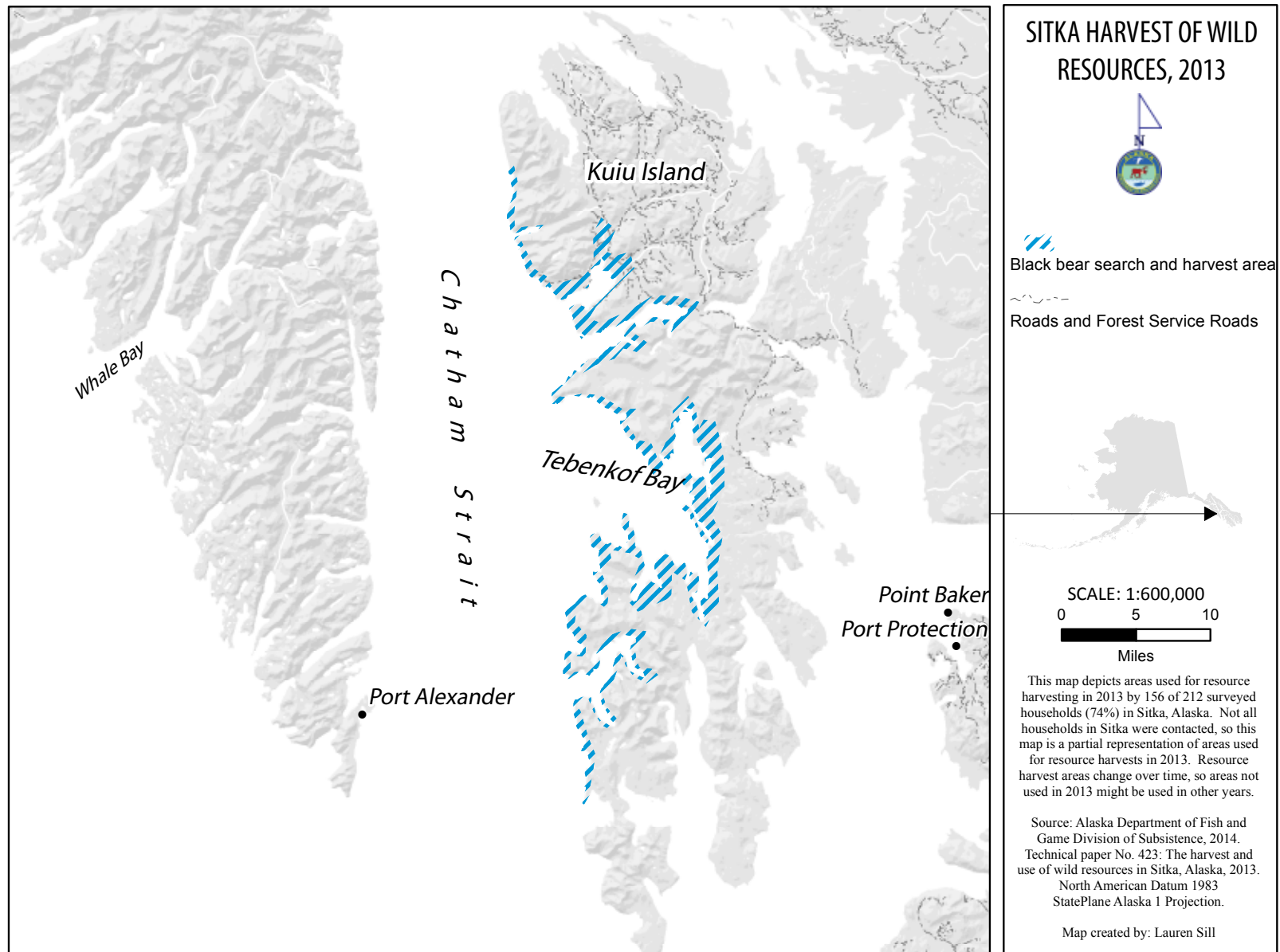


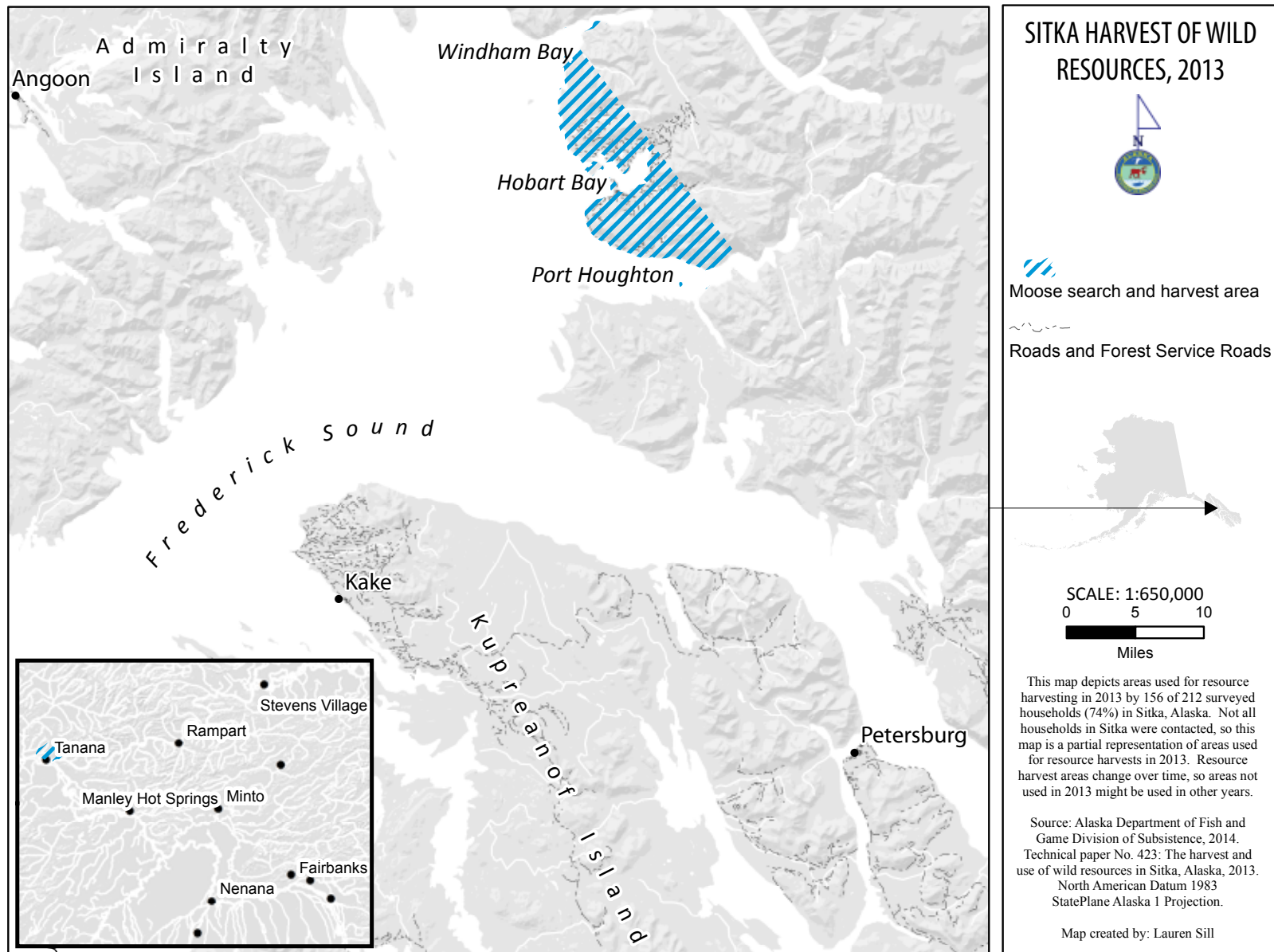


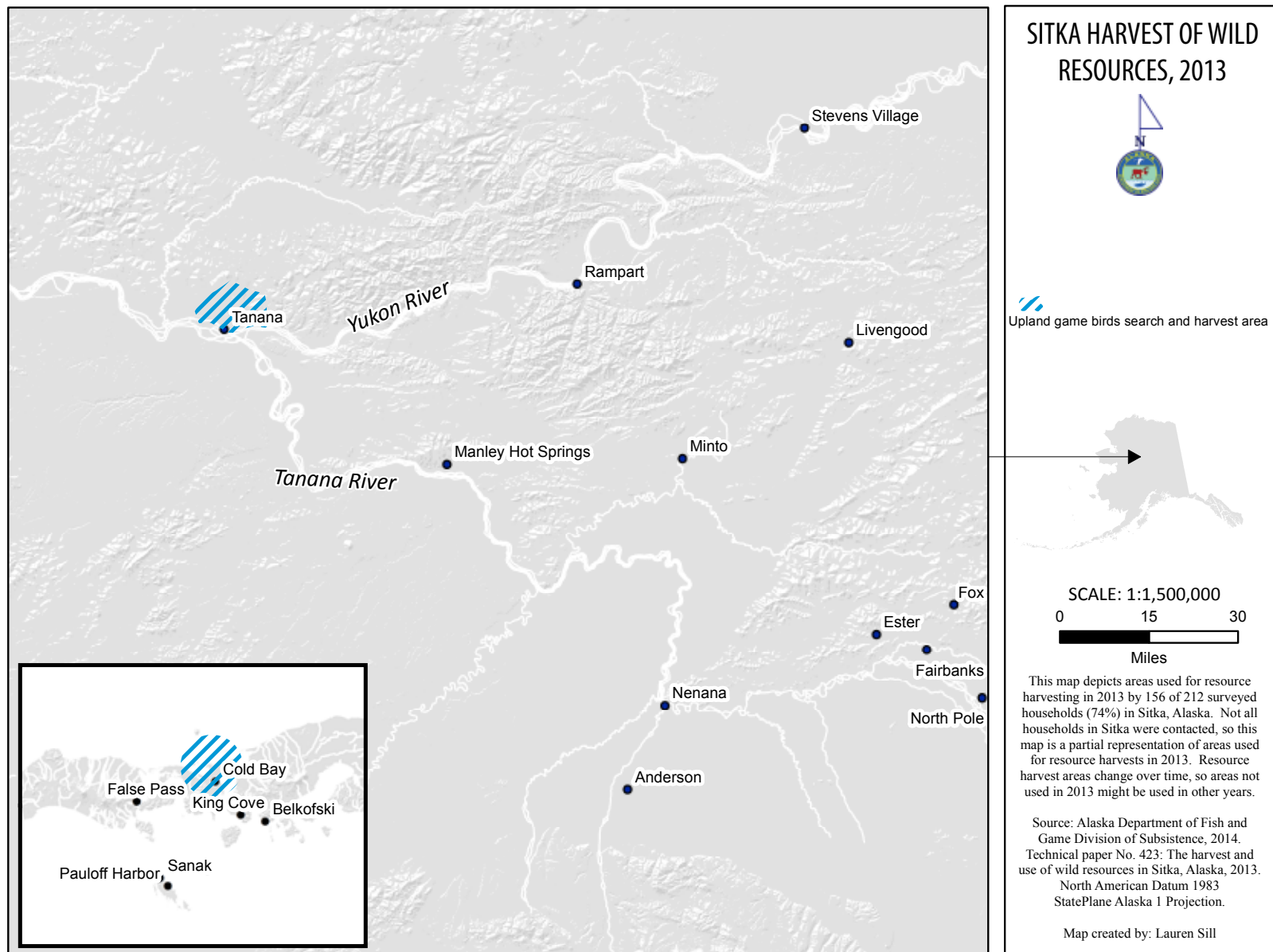












APPENDIX D–PROJECT SUMMARY



SITKA

Subsistence Harvests in 2013

In Sitka, 212 surveyed households reported harvesting a variety of fish, wildlife, and plants. Expanding for unsurveyed households, Sitka's total estimated harvest was 1,377,571 lb. Harvests averaged 465 lb per household and 175 lb per person.

In February 2014, ADF&G Division of Subsistence staff conducted a comprehensive wild foods harvest survey in Sitka. Residents who participated in the study answered detailed questions about their household's harvest and use of wild resources—including fish, wildlife, and plants and berries—during the 2013 calendar year. Households were asked whether they harvested wild resources and, if so, details about those harvests, such as how much they harvested, where, when, and whether they gave away or received resources from other households.

Ninety-nine percent of households in Sitka used at least one kind of wild resource and 91% of households harvested a resource. Nonsalmon fish was the most widely used resource category (by 91% of households), followed by salmon (88%), vegetation (84%), marine invertebrates (64%), land mammals (62%), marine mammals (11%), and birds and eggs (10%). Figure 1 shows the top 10 species harvested by weight.

Figure 2 shows the estimated usable pounds harvested by category. Fish dominated the harvest with 904,499 lb harvested; about 40% of the fish harvest was salmon, and the remainder was nonsalmon fish species (Table 1). Land mammals contributed the next greatest amount with 204,360 lb harvested, followed by marine invertebrates and vegetation with 146,387 lb and 94,405 lb harvested, respectively. Lastly, marine mammals contributed 24,225 lb while birds and eggs contributed 3,695 lb to the overall

estimated harvest.

Respondents were asked to show on a map where they searched for the wild foods they harvested (Figure 3). In 2013, Sitka respondents used most of Baranof Island and the surrounding area for the majority of their harvests, but also traveled throughout Southeast Alaska, as well as to the Aleutian Islands and into Interior Alaska (see maps in Appendix C of Technical Paper No. 423) for their harvests.

While most households participated in the harvest of wild resources, sharing among households was also prevalent. Seventy-six percent of households gave away some of their harvest while 92% of households received wild resources from other households. These high rates of exchange emphasize the importance of sharing and the cooperative nature of wild resource harvesting activities in Sitka.

This survey was conducted by the Division of Subsistence of the Alaska Department of Fish and Game in cooperation with Sitka Tribe of Alaska. Local research assistants were Pete Karras, Leota Bagby, Jessica Gill, Kitty Sopow, Heather Riggs, Courtney Johnson, and Kerry MacLane.

[Source for this information](#)

Sill, L. A. and D. Koster. 2017. *The Harvest and Use of Wild Resources in Sitka, Alaska, 2013*. Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 423: Douglas.

[Electronic copy of this report](#)

<http://www.adfg.alaska.gov/techpap/TP423.pdf>

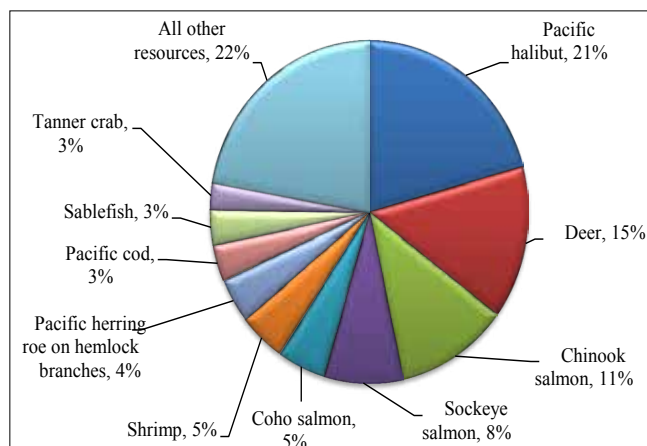


Figure 1.—Top 10 wild foods harvested by usable weight, 2013.

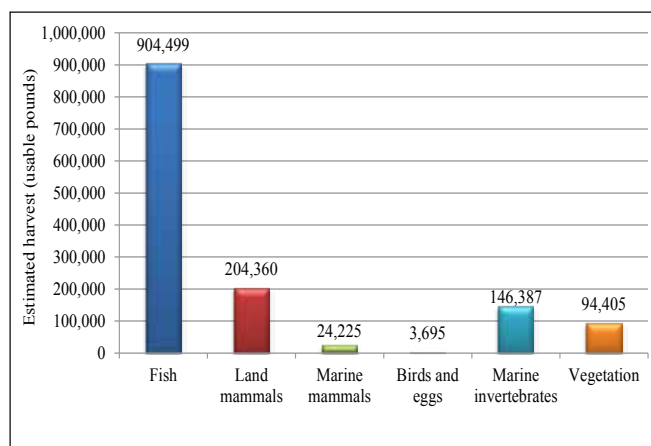


Figure 2.—Estimated harvest by category, 2013.

Table 1.—Estimated harvests of wild foods, Sitka, 2013.

	Percentage of households		Estimated pounds harvested			Total estimated amount harvested by community	95% confidence limit
Resource	Using	Harvesting	Total for community	Average per household	Average per person		
Fish							
Chum salmon	16.8%	12.1%	10,458.1 lb	3.5 lb	1.3 lb	1,731.9 ind	± 59.0%
Coho salmon	57.1%	38.6%	67,814.4 lb	22.9 lb	8.6 lb	15,863.0 ind	± 31.7%
Chinook salmon	78.3%	46.5%	156,889.7 lb	52.9 lb	19.9 lb	16,761.7 ind	± 38.8%
Pink salmon	24.2%	19.3%	20,972.0 lb	7.1 lb	2.7 lb	8,161.6 ind	± 60.7%
Sockeye salmon	45.6%	24.9%	109,573.2 lb	37.0 lb	13.9 lb	24,555.9 ind	± 39.4%
Unknown salmon	4.3%	0.2%	97.1 lb	— lb	— lb	17.8 ind	± 179.8%
Pacific herring	17.7%	13.9%	25,868.4 lb	8.7 lb	3.3 lb	4,311.4 gal	± 65.7%
Pacific herring roe/unspecified	0.9%	0.7%	6,420.0 lb	2.2 lb	0.8 lb	1,625.9 gal	± 192.5%
Pacific herring sac roe	0.7%	0.7%	85.6 lb	— lb	— lb	21.7 gal	± 0.0%
Pacific herring spawn on kelp	9.0%	4.7%	4,297.2 lb	1.4 lb	0.5 lb	1,088.3 gal	± 78.1%
Pacific herring roe on hair seaweed	2.1%	1.7%	1,474.2 lb	0.5 lb	0.2 lb	373.4 gal	± 148.8%
Pacific herring roe on hemlock branches	32.5%	7.5%	58,213.8 lb	19.6 lb	7.4 lb	14,743.2 gal	± 45.0%
Silver smelt	1.1%	0.9%	665.5 lb	0.2 lb	0.1 lb	73.9 gal	± 170.7%
Pacific (gray) cod	6.9%	5.8%	46,994.0 lb	15.8 lb	6.0 lb	14,685.6 ind	± 177.7%
Pacific tomcod	1.7%	1.7%	63.1 lb	— lb	— lb	126.2 ind	± 134.7%
Flounder	1.5%	0.7%	65.0 lb	— lb	— lb	21.7 ind	± 0.0%
Lingcod	26.2%	21.0%	25,988.6 lb	8.8 lb	3.3 lb	4,125.2 ind	± 102.5%
Pacific halibut	74.5%	32.7%	285,317.1 lb	96.2 lb	36.2 lb	285,317.1 lb	± 78.1%
Rockfish	54.9%	40.2%	30,769.1 lb	10.4 lb	3.9 lb	30,769.1 lb	± 34.1%
Sablefish (black cod)	26.2%	5.0%	46,636.6 lb	15.7 lb	5.9 lb	11,659.1 ind	± 179.0%
Red Irish lord	0.2%	0.2%	5.9 lb	— lb	— lb	5.9 ind	± 179.8%
Skates	1.5%	0.7%	325.2 lb	0.1 lb	— lb	65.0 ind	± 0.0%
Dolly Varden	7.1%	6.3%	3,518.5 lb	1.2 lb	0.4 lb	1,172.8 ind	± 81.5%
Trout	5.4%	4.5%	1,986.4 lb	0.7 lb	0.3 lb	1,986.4 lb	± 104.0%
Subtotal, fish	95.6%	60.7%	904,498.8 lb	305.1 lb	114.9 lb	904,498.8 lb	± 43.3%
Land mammals							
Brown bear	0.9%	0.7%	3,251.8 lb	1.1 lb	0.4 lb	21.7 ind	± 192.5%
Deer	56.2%	25.9%	200,051.8 lb	67.5 lb	25.4 lb	2,500.6 ind	± 35.3%
Beaver	1.7%	1.7%	948.5 lb	0.3 lb	0.1 lb	132.2 ind	± 138.2%
River (land) otter	0.9%	0.9%	0.0 lb	— lb	— lb	841.9 ind	± 174.4%
Marten	2.4%	2.4%	0.0 lb	— lb	— lb	2,087.7 ind	± 160.8%
Mink	1.9%	1.9%	0.0 lb	— lb	— lb	722.0 ind	± 114.2%
Squirrel	0.7%	0.7%	108.4 lb	— lb	— lb	108.4 lb	± 192.5%
Weasel	0.2%	0.2%	0.0 lb	— lb	— lb	23.8 ind	± 179.8%
Subtotal, land mammals	62.1%	26.7%	204,360.5 lb	68.9 lb	26.0 lb	204,360.5 lb	± 35.3%
Marine mammals							
Harbor seal	7.4%	1.6%	23,036.4 lb	7.8 lb	2.9 lb	274.2 ind	± 120.1%
Sea otter	3.1%	2.2%	— lb	— lb	— lb	468.0 ind	± 684.6%
Steller sea lion	0.2%	0.2%	1,188.1 lb	0.4 lb	0.2 lb	5.9 ind	± 179.8%
Subtotal, marine mammals	10.6%	3.3%	24,224.6 lb	8.2 lb	3.1 lb	24,224.6 lb	± 117.3%
Birds and eggs							
Ducks	9.4%	8.4%	2,493.3 lb	0.8 lb	0.3 lb	2,493.3 lb	± 84.6%
Geese	3.0%	2.2%	801.3 lb	0.3 lb	0.1 lb	801.3 lb	± 124.0%
Seabirds, loons, grebes	0.7%	0.7%	43.4 lb	— lb	— lb	43.4 lb	± 192.5%
Other birds	1.0%	0.8%	356.9 lb	0.1 lb	— lb	356.9 lb	± 187.1%
Subtotal, birds and eggs	10.3%	8.5%	3,694.8 lb	1.2 lb	0.5 lb	3,694.8 lb	± 95.8%
Marine invertebrates							
Abalone	2.6%	2.4%	304.9 lb	0.1 lb	— lb	145.2 gal	± 148.0%
Chitons (bidarkis, gumboots)	4.5%	2.8%	1,731.5 lb	0.6 lb	0.2 lb	1,731.5 lb	± 67.3%
Clams	17.3%	13.5%	13,731.6 lb	4.6 lb	1.7 lb	13,731.6 lb	± 55.6%
Cockles	7.9%	5.1%	1,980.6 lb	0.7 lb	0.3 lb	1,980.6 lb	± 94.9%
Crabs	50.3%	24.6%	60,753.1 lb	20.5 lb	7.7 lb	60,753.1 lb	± 85.6%
Geoducks	1.9%	0.7%	130.1 lb	— lb	— lb	43.4 gal	± 192.5%
Limpets	0.2%	0.2%	0.3 lb	— lb	— lb	0.2 gal	± 179.8%
Mussels	0.9%	0.2%	44.6 lb	— lb	— lb	29.7 gal	± 179.8%
Octopus	6.9%	3.4%	1,140.1 lb	0.4 lb	0.1 lb	1,140.1 lb	± 122.2%
Rock scallops	0.2%	0.2%	3.0 lb	— lb	— lb	1.8 gal	± 179.8%
Sea cucumber	2.9%	2.2%	1,149.0 lb	0.4 lb	0.1 lb	1,149.0 lb	± 181.8%
Shrimp	37.0%	17.9%	64,993.6 lb	21.9 lb	8.3 lb	64,993.6 lb	± 63.2%
Subtotal, marine invertebrates	64.4%	37.3%	146,387.2 lb	49.4 lb	18.6 lb	146,387.2 lb	± 49.5%
Vegetation							
Berries	79.9%	74.8%	73,831.8 lb	24.9 lb	9.4 lb	73,831.8 lb	± 30.4%
Plants, greens, and mushrooms	30.0%	24.8%	5,670.0 lb	1.9 lb	0.7 lb	5,670.0 lb	± 55.3%
Seaweed/kelp	27.6%	16.0%	14,903.0 lb	5.0 lb	1.9 lb	14,903.0 lb	± 72.2%
Wood	21.0%	19.3%	0.0 lb	— lb	— lb	1,721.0 cord	± 49.3%
Subtotal, vegetation	84.2%	80.0%	94,404.8 lb	31.8 lb	12.0 lb	94,404.8 lb	± 27.5%
All resources	98.5%	90.6%	1,377,570.6 lb	464.6 lb	175.0 lb	1,377,570.6 lb	± 34.4%

Source: ADF&G Division of Subsistence household surveys, 2014.

Note: "—" indicates either: a) the resource is not typically eaten and shows a non-zero harvest amount with a zero harvest weight, or b) the estimated value is too small to be represented to the tenth decimal place.

Note: Resources harvested not having a confidence interval were those harvested by 1 of 2 households where harvests were not expanded.

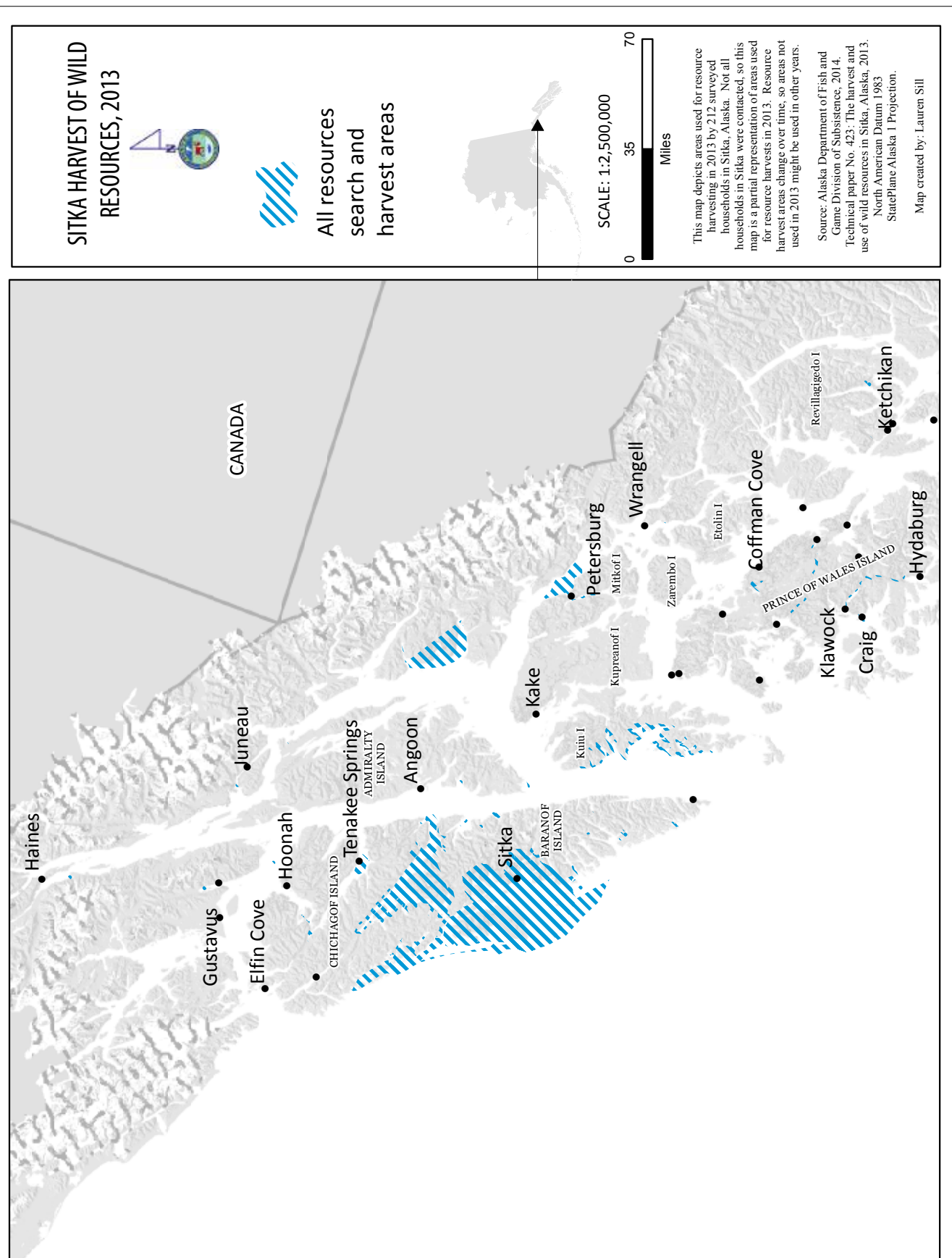


Figure 3.—Wild food search and harvest areas, Sitka, 2013.

Subsistence Harvests in Southeast Alaska, 2012/2013

Current comprehensive estimates of the harvest of wild foods are available for 6 Southeast Alaska communities. In these communities, the average wild food harvests provided approximately 269 lb of wild food per person in the 2012 and 2013 study years. This compares to an average for 2014 of 189 lb per person for all of rural Southeast Alaska and 275 lb per person for all of rural Alaska.¹

1. Fall, J. A. 2016. *Subsistence in Alaska: A Year 2014 Update*. Alaska Department of Fish and Game Division of Subsistence: Anchorage. http://www.adfg.alaska.gov/static/home/subsistence/pdfs/subsistence_update_2014.pdf

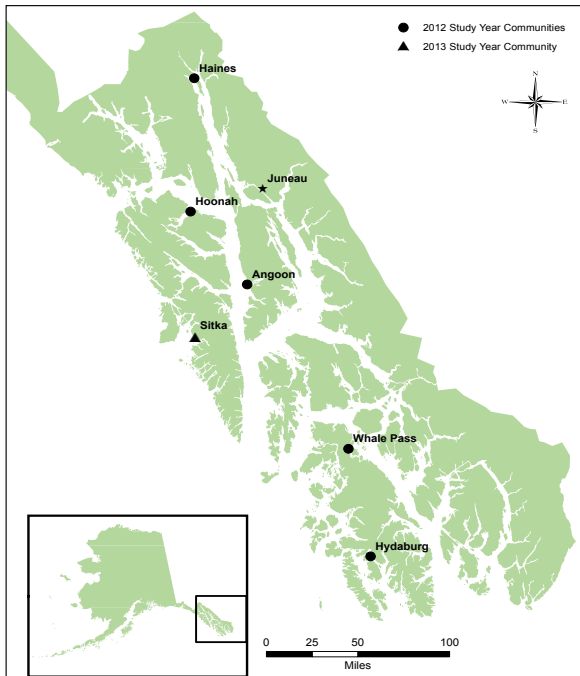


Figure 4.—Location of study communities, 2012 and 2013.

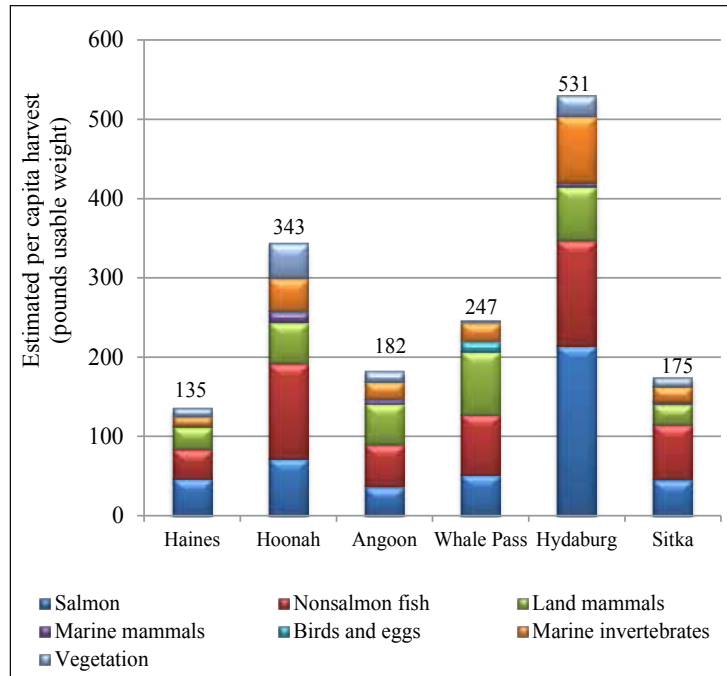


Figure 5.—Estimated wild foods harvested, usable pounds per person, 6 Southeast Alaska communities, 2012 and 2013.

Funded by the Alaska Legislature, this study updates current harvest and use estimates of wild resources for 6 Southeast Alaska communities over 2 study years (Figure 4). The effort to collect this updated information for the 2012 and 2013 study periods was part of a project to develop and implement a program to monitor subsistence harvests of fish and wildlife in all areas of the state through a system of index communities. The primary data gathering method was a systematic household survey that collected quantitative and qualitative harvest information, including mapping harvest areas.

Figure 5 shows the harvest of wild resources in each study community as estimated in pounds usable weight per person. Harvests of wild foods ranged from 135 lb per person in Haines to 531 lb per person in Hydaburg. For Haines and Hydaburg, salmon was the top resource category harvested in terms of pounds per capita. For Angoon, Hoonah, and Sitka, nonsalmon fish was the top resource category. Only

in Whale Pass was large land mammals the top harvested category.

These harvest patterns mirror historical patterns of a heavy reliance on the marine environment. The overall contribution of salmon and nonsalmon fish changed the most from prior harvest updates. In most communities, nonsalmon fish are now harvested in greater amounts than salmon. Residents of these Southeast Alaska communities mainly used the lands and waters in the vicinity of their respective communities for harvesting wild resources. While it is difficult to compare existing harvest and use area maps that depict multiple years of harvest to this study and its single year of focus, it appears that the harvest areas of most of these Southeast Alaska communities have decreased in size. Area residents provided numerous reasons for changes to their harvest areas, including the price of gas, competition for resources, and changes in distributions of populations.

Households across the region reported diverse harvests and high levels of participation in harvesting and processing activities. Extensive sharing of wild resources within and among communities was documented. In sum, the use of wild foods remains an important component of community life in Southeast Alaska.



DIVISION OF SUBSISTENCE

ADF&G complies with OEO requirements as posted at:
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